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IN REPLY REFER TO:

February 23, 1984

Dear Reader:

Enclosed for your review and comment is a new Draft Environmental Impact Statement on the management of the Charles M. Russell National Wildlife Refuge in Montana.

During August 1980, a Draft Environmental Impact Statement (DEIS) was printed and distributed for comment. Public meetings regarding the DEIS subsequently were held in Washington, D.C., and Lewistown, Glasgow, and Missoula, Montana. Litigation entered into in June 1981 interrupted this process, and publication of the Final EIS was delayed.

Because of a delay of over 3 years, the earlier DEIS has been canceled, and this new DEIS has been prepared and is being circulated for comment. Comments, verbal and written, received during public review of the earlier DEIS have been incorporated into this document.

The Proposed Action is an improved management program for the 1,094,301-acre refuge. Five alternatives are discussed: 1) continuation of the present management program (No Action), 2) enhanced wildlife habitat management (Proposed Action), 3) intensive wildlife management, 4) multiple use, and 5) elimination of livestock.

Comments on this DEIS are hereby solicited and will be accepted until May 15, 1984, or 60 days after distribution of this document, whichever date is later. Written comments should be sent to:

Regional Director (WR)
U.S. Fish and Wildlife Service
P.O. Box 25486, Denver Federal Center
Denver, CO 80225

Sincerely,


ROBERT H. SHIELDS
Regional Director

Enclosure

DRAFT ENVIRONMENTAL IMPACT STATEMENT

MANAGEMENT OF CHARLES M. RUSSELL NATIONAL WILDLIFE REFUGE

Department of the Interior
U.S. Fish and Wildlife Service
Regional Office, Denver, Colorado

February 1984



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FOREWORD

Historically, management of the Charles M. Russell National Wildlife Refuge (CMR) has been hampered by a lack of comprehensive planning and conflicting jurisdiction by three agencies: Army Corps of Engineers (COE), Bureau of Land Management (BLM), and U.S. Fish and Wildlife Service (FWS).

Passage of Public Law 94-223 in 1976 resolved the jurisdictional problems with BLM. A Memorandum of Agreement in 1979 between COE and FWS solved most problems between these agencies.

Public Law 94-223, dated February 27, 1976, also specifically directed that CMR would be managed under the National Wildlife Refuge System Administration Act of 1966. The recent decision of the Appellate Court reaffirmed this law.

On September 20, 1979, the Fish and Wildlife Service issued a Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS) on the management of the CMR.

The Service's scoping process provided opportunity for public input on the development of an EIS. Various groups and individuals from a wide variety of backgrounds and interests, which included Refuge permittees, did provide management recommendations. Public meetings were advertised by news media and phone calls. Letters were sent to individuals, Federal, State, and local government representatives, and other interested parties. Meetings were held by FWS in Lewistown, Helena, Billings, and Glasgow, Montana, in April 1978, and in Lewistown, Helena, Billings, Glasgow, Missoula, Jordan, Great Falls, and Glendive in September 1979. Corps of Engineers also held meetings at Glasgow, Lewistown, Glendive, and Jordan in June 1979. These efforts resulted in identification of specific resource problems and possible solutions.

During August 1980, a Draft EIS (DEIS) was printed and distributed to interested parties for comment. Public meetings regarding the DEIS were held in Washington, D.C. and Lewistown, Glasgow, and Missoula, Montana, during late 1980. Public comments were solicited and received.

Publication of the Final EIS was delayed due to court action (Schwenke, et al, vs. Secretary of the Interior, et al). On January 14, 1982, U.S. District Court in Billings, Montana, ruled:

"....We have decided that the ranchers are entitled to have grazing declared a co-equal priority with wildlife conservation...."

"....thus we must conclude that CMR must still be administered under the Taylor Grazing act."

The District Court's decision was appealed to the United States Ninth Circuit Court of Appeals. On October 14, 1983, the Appellate Court overturned the District Court and ruled that:

"(1) Wildlife has priority in access to the forage resources of the range up to the limits specified in Executive Order 7509;

(2) Beyond those limits, wildlife and livestock have equal priority in access to the resources of the Range; and

(3) The Range is to be administered under the Wildlife Refuge Act."

("Range" refers to the CMR. The "Wildlife Refuge Act" refers to the National Wildlife Refuge System Administration Act of 1966.)

The ruling of the Appellate Court reaffirmed the criteria followed in preparing the original DEIS. However, due to a delay of over 3 years, the Service has decided to cancel the earlier DEIS and this new DEIS has now been prepared.

All previous letters, verbal and written comments, and suggestions received during the earlier review process and public meetings have been addressed in preparation of the new DEIS.

The new DEIS, while assessing various options proposed to resolve some of the Refuge's resource conflicts, is not a comprehensive management plan.

Because habitat is recognized as the key to wildlife abundance, this document emphasizes habitat quality and quantity rather than wildlife populations or densities. Where possible, the habitat's capability to support numbers of animals per unit area has been used. Establishment of high quality wildlife habitat will provide desired populations of wildlife species within constraints imposed by drought, severe winters, disease, and other variables which are largely uncontrollable.

Range conditions and wildlife habitat are not the same and should not be used synonymously. Range condition measures such parameters as plant species composition and production. It does not address important wildlife habitat components such as residual cover, vegetative interspersion and diversity, nor does it attach sufficient importance to key wildlife shrub communities.

This Environmental Impact Statement follows the Council on Environmental Quality's regulations for implementing The National Environmental Policy Act, as amended July 30, 1979. Appendices, a glossary, and an index are in the back of the publication. A large, fold-out map is provided inside the back cover for easy reference.

After public review of this DEIS, a Final EIS and Record of Decision (ROD) will be issued. This ROD will state which alternative has been selected for implementation.

Once the Record of Decision is completed, specific habitat (allotment) management plans to meet the goals and objectives, as outlined in the Final Environment Impact Statement or as modified by the Record of Decision, will be developed.

Management planning will be coordinated with BLM and affected publics. Management options such as fencing, range improvements, seasons of grazing use, etc. will be developed to meet Refuge objectives, while taking the needs of grazing permittees, land managing agencies, and other interested parties into full account.

The National Wildlife Refuge System Manual will provide policy guidance for the issuance of grazing permits. In 6 RM 9.7 C(1) of the Refuge Manual, it states: "At CMR only, the purchaser of a current grazing permittee's private lands, unless ineligible for grazing privileges for reasons of age or citizenship, will be given preference for grazing privileges on the current permittee's allotment in the first ensuing grazing period."

Further, 6 RM 9.9 of the Refuge Manual states, "Permits will normally be issued for a one-year period. Use of multi-year permits for special circumstances and unit rotations (up to a maximum of five years) must be provided for in an approved grassland management plan." Thus, one year grazing permits will continue to be issued until the AUM levels established by the Record of Decision are attained and habitat management plans are approved. Once this occurs, grazing permits of up to 5 years in length may be issued.

Evaluation procedures will be included in the plans to ensure that the wildlife objectives are being achieved.

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SUMMARY

This Environmental Impact Statement (EIS) is prepared in specific response to litigation filed in U.S. District Court for the District of Columbia, entitled Natural Resources Defense Council, Inc., et al. versus Rogers C. B. Morton, et al. (June 1975). The EIS presents five management alternatives to solve some of the resource problems on Charles M. Russell National Wildlife Refuge (CMR), located in north-eastern Montana.

Nearly 1.1 million acres comprise CMR which includes the 249,000-acre Fort Peck Reservoir. Part of the Missouri River which flows through the refuge is administered by the Bureau of Land Management as the nationally designated Upper Missouri National Wild and Scenic River. Besides the grazing activity authorized by the Executive Order establishing CMR, three state parks managed by the Montana Department of Fish, Wildlife and Parks and several recreation areas administered by the Army Corps of Engineers (COE) are located on the refuge, making this an atypical refuge compared to other units of the National Wildlife Refuge System.

Although varying quantities of oil, gas, and coal are known to occur beneath the rugged landscape, these and other energy resources have a low to moderate potential for development. However, development of these resources outside the refuge and in the surrounding region could increase significantly in the future and would have far-reaching impacts on the refuge.

Soils on the refuge fall into four major orders: Mollisols, which are highly productive prairie soils and are quite limited; Aridisols, which possess potential for agricultural use; Entisols, which typically are found in the "breaks" portion of the refuge and have a very unstable surface; and Vertisols, which are commonly associated with fine textured Bearpaw shales found on strongly sloping sedimentary uplands. Soils and weathered bedrock on the refuge are moderately to highly expansive, tending to swell when wetted and heave when excavated which limits the types of development they can support.

Five major vegetative types exist on the refuge, the largest being the sagebrush-greasewood-grassland type that comprises more than 60 percent of the area. About 35 percent of the area is associated with the ponderosa pine-juniper type. Grassland, riparian, and cultivated land types occupy the balance of the area. Although the riparian community was extensive before being inundated by Fort Peck Reservoir, it now occupies only 0.7 percent of the area and provides one of the most important and productive wildlife habitat types.

Warm summers and cold winters create a harsh environment. From the uplands to the flood plains, the great variation in topography and vegetation creates a diversity of wildlife habitat. Plains grizzly bears, American bison, Audubon bighorn sheep and wolves once roamed the refuge, but are no longer present. Even before their time, the area supported a rich assemblage of plant and animal life, as evidenced by significant paleontological discoveries in the Hell Creek and Fort Union formations.

Summary

Today the primary species are mule deer, white-tailed deer, pronghorns, Rocky Mountain elk, sharp-tailed and sage grouse and black-tailed prairie dogs. No threatened species of animals are known to occur on the refuge. Endangered wildlife species include peregrine falcons, bald eagles and possibly black-footed ferrets. The refuge may be within the geographical distribution of Rorippa calycina, a species of watercress which is proposed for classification as a threatened plant species.

Wildlife habitat on the refuge is only in fair condition. Present deficiencies in habitat include lack of residual cover (grasses and forbs) on upland sites, around ponds and in hardwood draws, poor quality and small quantity of deciduous shrubs and trees in hardwood draws and along minor stream courses, poor quality sagebrush stands and insufficient timber density in some areas. There is potential to improve most of the habitat on CMR.

In terms of climax range vegetation, the refuge is predominantly in good condition. Where deteriorated conditions are present, poor livestock distribution is the most common problem, causing about seven percent of the grazed portions of the refuge to be in fair range condition. Portions of the refuge in poor range condition are generally associated with prairie dog towns or flood plains.

The refuge has relatively few developed recreation areas. Most of these are COE areas located near Fort Peck Townsite and the Big Dry Arm segment of the reservoir. Private cabins are located on federal land at four locations. Including visitation at COE and state facilities, an estimated 357,000 visitor days of use occurred on the refuge in 1978. The most popular activities were viewing scenery and exhibits, picnicking, hunting, fishing, powerboating, and camping. Most of this use occurred near developed recreation areas on the east side of the refuge.

Numerous prehistoric campsites, tipi rings, stone markers, bison kill sites, homesteads, pioneer graves and townsites are scattered throughout the area. There is one designated national historic site, two national natural landmarks, four research natural areas, one designated wilderness area, 15 proposed wilderness areas and the Upper Missouri National Wild and Scenic River.

Grazing and haying activities on the refuge, contribute slightly to the Regional economy. Expenditures by recreationists generate additional income, as does hydropower production from Fort Peck Dam and Reservoir. The area around the refuge has been characterized by relatively slow economic growth with an economy based on the production of grain and livestock.

In 1979 there were 67 grazing allotments located partially or totally on the refuge, consisting of 87 individuals, companies or associations grazing about 60,000 animal-unit months (AUMs). Based on a grazing fee of \$1.89/AUM, this activity contributes nearly \$107,000 to the US Treasury. Since 1979, pending the issuance of an EIS, the Refuge has essentially been managed on a status quo basis. One exception is that grazing fees have increased. In 1984, grazing fees were \$4.61/AUM, thus contributing about \$277,000 to the U.S. Treasury.

Approximately 800 acres of land were farmed on the Refuge by eight cooperators. Income derived from this source was estimated to be less than \$10,000.

Appendix 1b. delineates the planning process for CMR.

Summaries of five alternatives considered in this document and their probable impacts are:

NO ACTION ALTERNATIVE

Management would continue unchanged. Animal damage control would occur to solve specific problems. Livestock numbers would not change. Major management actions would include surveys, issuing grazing licenses, some cooperative farming and wildfire control. There would be no significant improvement in range conditions or wildlife habitat. Any changes in the status of recreational development would be accomplished in accordance with the Memorandum of Agreement of July 1979 and in accordance with FWS policies and objectives.

PROPOSED ACTION ALTERNATIVE

Peregrine falcons, black-footed ferrets, bighorn sheep and swift fox would be reintroduced as they become available. Wildlife habitat conditions would be substantially enhanced by 2005 with most grazing reductions and other major actions implemented by 1990 and the remainder by 2005. Wildlife habitat management objectives would be met or exceeded refuge-wide by 2005. Significant management actions would include adoption of prescription grazing that would result in reduction in livestock grazing as well as changing existing livestock seasons of use and modifying existing grazing systems to benefit wildlife. Some shrub planting and construction of exclosures would occur. Most wildfires would be suppressed and some prescribed burning would occur on the west half of the refuge and in Garfield County. Some boundary fences and a few interior fences would be constructed. A few new reservoirs, water pipelines and several troughs would be built. Wildlife habitat would be evaluated periodically to ensure that wildlife objectives were being met; necessary corrections in management would be made. Farming along the Missouri River would be phased out but some lure crop farming would be tried to decrease elk depredation on private lands. Animal damage control would be similar to the No Action alternative.

Federal livestock AUM's would eventually be reduced an average of 33 percent below levels presently authorized to achieve a light grazing level determined to be consistent with wildlife objectives. Some inholdings would be acquired and ownership of all lands within CMR would be ascertained.

There would be more opportunities for wildlife recreation due to improvement of habitat and expected increases in wildlife populations. Present high and low density recreation areas would be retained and expanded as needs dictate. A new boat access site would be established at Fourchette Bay. Private cabin sites would not be affected at the time. Interpretive programs would be emphasized and access to recreational areas and facilities would be improved.

Summary

INTENSIVE WILDLIFE MANAGEMENT ALTERNATIVE

Special arrangements with the State Land Board (SLB) and COE changes in policy for CMR would have to occur to fully implement this alternative. A substantial budget increase would be necessary.

Endangered and unique species introductions would be as stated in the Proposed Action alternative. About 2,000 acres would be farmed in plots of varying sizes to increase wildlife food supplies and habitat diversity. Waterfowl ponds would be developed at UL Bend. Bison would be introduced on the UL Bend area. Spawning habitat for fish would be developed on the reservoir. Wildlife habitats would be enhanced to maximum potential for most species in a minimum time span. Most actions to achieve desired habitat levels would be implemented by 1990 and the remainder by the year 2005; however, the time required for maturation of certain vegetative communities would take 50 or more years. Burning, farming, soil ripping, shrub and conifer planting and exclosure fencing would be considerably more extensive than the Proposed Action. Periodic habitat evaluation would occur and most wildfires on CMR would be suppressed as stated in the Proposed Action. Some prescribed burning would occur in Garfield County and on the west half of the refuge. Many inholdings would be acquired. Predator control to protect livestock and prairie dog control would be the same as the No Action alternative. Coyote and small mammal control to benefit other wildlife species would be minimal. The naturalness management concept would be eliminated in favor of developments which would provide maximum benefits to wildlife.

Livestock grazing would be employed as a tool to achieve or maintain desired wildlife habitat. Livestock AUMs would be reduced to about 27,000-30,000 federal AUMs as a result of this alternative.

Range improvements would be limited to fencing approximately two-thirds of the refuge boundary to regulate livestock.

Recreation would be oriented toward wildlife activities. Private cabins would be eliminated and the areas returned to wildlife habitat. More primitive fishing access sites would be provided and replace some existing high and low density recreation areas. Nature trails would be established at several locations.

MULTIPLE USE ALTERNATIVE

This alternative would require Congressional action to implement. It would emphasize all resources instead of just wildlife. Wildlife values would be equal to livestock as would recreation. This alternative would provide only slight improvements in habitat quality and wildlife objectives would not be met by the year 2005. About 41,000 acres would be improved for wildlife habitat by prescribed burning, soil ripping, shrub planting and farming. Ten miles of exclosure fence would be constructed. Most wildfires would be controlled as soon as possible.

Animal damage control for livestock losses would be conducted under the same regulations as adjacent land. Animal damage control for wildlife other than coyotes would be minimal. Waterfowl production areas would be expanded at UL Bend. Endangered and unique species introductions would be more limited than the Proposed Action alternative.

Summary

Livestock would receive approximately one-half the allocated forage by the year 2005. There would be some boundary and interior fence construction. Seventy-seven reservoirs, two springs and 13 water troughs would be constructed, and deferred or rest-rotation grazing systems would be implemented on twelve allotments.

Recreational use and development would be greater than with the other alternatives. As needs dictate, high and low density recreation areas would be expanded, a perimeter shoreline scenic road in the vicinity of Fort Peck would be constructed and a major backcountry trail extending the length of the refuge would be designated. Private cabins would remain as they are.

NO GRAZING ALTERNATIVE

Changes in SLB policy would have to occur before state inholdings could be acquired. All private and state inholdings would have to be acquired before elimination of livestock grazing could occur since most of these areas are unfenced and stocked by the operators at carrying capacity levels. Habitat improvements in residual cover and quantity of forbs would be maximized. Increased shrub quality in hardwood draws would be significant. About 28,500 acres of habitat would be improved by farming, prescribed burning, soil ripping and shrub and conifer planting. Six miles of exclosure fence would be constructed. Wildfire control would be similar to the Proposed Action.

Animal damage control for wildlife and livestock would be the same as the No Action alternative. Endangered and unique species introductions would be similar to the Proposed Action alternative.

All livestock grazing would be eliminated by the year 2005. The entire refuge boundary would be fenced where possible.

Recreational development and use would be about the same as the Proposed Action alternative.

I. PURPOSE AND NEED FOR ACTION

I. PURPOSE AND NEED FOR ACTION

Many wildlife-livestock problems at the Charles M. Russell National Wildlife Refuge (CMR) have resulted from conflicting management and legislation during 40 years of joint administration by the Fish and Wildlife Service (FWS), Bureau of Land Management (BLM), and Corps of Engineers (COE). These agencies embrace differing management responsibilities, goals, and philosophies, and because of numerous federal laws applicable to CMR, ultimate management authority was unclear. In addition, numerous private and state inholdings complicate management.

When the Fort Peck Game Range (now CMR) was established in 1936, BLM was assigned livestock management, and all forage above the needs of wildlife was to be available for livestock grazing. FWS was assigned wildlife management responsibility simultaneously with BLM's responsibility for livestock grazing. Resulting multiple use management did not realize the wildlife intent for CMR. In 1976, Congress transferred grazing responsibilities to FWS to better realize wildlife potentials. The change shifted grazing management from the Taylor Grazing Act to the Refuge Administration Act.

FWS changes in grazing practices have resulted in distrust and uncertainty of CMR goals by the livestock industry and federal and state agencies. Misunderstanding arises from refuge management, with its dominant purpose for wildlife as opposed to adjacent BLM lands, where multiple use allows more livestock grazing.

Recent challenges at CMR are management of archeological and historical sites, reintroduction of endangered or threatened species, a growing regional and national sentiment by environmental groups for reduction or elimination of livestock grazing versus a local sentiment for more grazing, conflicts regarding consumptive versus nonconsumptive use of wildlife, fencing of the boundary, management of CMR as an isolated wildlife oasis versus management as part of a total ecosystem, local recreation demands that may not be compatible with CMR goals, and integration of wildlife, recreation, and other natural values.

FWS believes that the key to meeting its management objectives on CMR is to evaluate the current status of the resource and devise a master plan, taking into consideration all interests. The planning process has included resource inventories, opportunities for resource development, conflict analyses, and a scoping process whereby the public had opportunities to identify significant issues.

The scoping process involved people with diverse backgrounds and interests in many natural resource areas from across the nation. Some toured CMR, providing management recommendations. Public meetings were advertised by news media and phone calls. Letters were sent to individuals, special interest groups, and Federal, State, and local government representatives. Meetings were held by FWS in Lewistown, Helena, Billings, and Glasgow in April 1978, and in Lewistown, Helena, Billings, Glasgow, Missoula, Jordan, Great Falls, and Glendive in September 1979. COE also held meetings at Glasgow, Lewistown, Glendive, and Jordan in June 1979. These efforts resulted in identification of specific resource problems and possible solutions, which are developed in the alternatives presented in this document.

This Environmental Impact Statement (EIS) was prepared in compliance with the National Environmental Policy Act of 1969, and in specific response to litigation filed in U.S. District Court, for the District of Columbia, entitled, National Resources Defense Council, Inc. et al. versus Rogers C. B. Morton et al. (June 1975), which required the Department of Interior to write EIS's for grazing management on 212 units of federal rangelands in the West, including CMR. The primary responsibility for writing these statements was given to BLM. However, on 17 February 1976, amendments to the National Wildlife Refuge System Administration Act (Public Law 94-223) were passed, giving BLM's jurisdiction of the refuge to FWS, along with the responsibility for writing this statement. As a result of negotiation with NRDC, it was agreed that the EIS for CMR would cover the entire management of the refuge, of which grazing is a major part.

II. ALTERNATIVES

II. ALTERNATIVES

This chapter defines and evaluates five management alternatives for CMR and concludes with a comparison. Management alternatives for wilderness and minerals have been deferred until a later date; plans for managing 15 proposed wilderness areas comprising approximately 161,000 acres on CMR will be developed after Congressional action on these areas is taken. These plans will take into account such items as access, fire control, mining, visitor carrying capacity, and wildlife habitat requirements. None of the alternatives compromises wilderness values of existing or proposed areas. Also, a specific management plan for prairie dogs will be prepared at the end of a current study, since adequate information is not now available.

Management actions for all alternatives must take into account special Legislative and Executive mandates for cultural resources and endangered or threatened species. Before any action is taken which may impact cultural resources, individual site surveys will be completed for each area; these requirements will be met under all alternatives as required by law.

Under Section 7 of the Endangered Species Act, a biological opinion is required on effects of each alternative on endangered or threatened species present or thought to be present on the refuge. The biological opinions have been made (Appendix 1a). In addition, an assessment of impacts will be made on the proposed area from which black-footed ferrets would be captured for transplanting to the refuge. Black-footed ferrets are not expected to be available in the near future.

Recreation proposals in all alternatives are a combination of proposals by FWS, COE, and Montana Department of Fish, Wildlife, and Parks (MDFW&P). A detailed description of each is available for inspection at the FWS office in Lewistown, Montana. All developments would be constructed with facilities for handicapped users as required by the Architectural Barriers Act of 1968, P.L. 90-480.

For analysis of wildlife habitat on CMR, 17 indicator wildlife species in five major vegetative types (Fish and Wildlife Service 1979) were studied. Included were seven game species, seven nongame species, and three furbearers (Appendix 2).

Although habitat requirements are different for various species on CMR, habitat deficiencies for many can be corrected by fulfilling requirements of short-tailed grouse, mule deer, and pronghorns. For example, sampling data revealed that improving the habitat for sharp-tailed grouse alone will correct habitat for approximately 80 percent of all wildlife species using the same habitat. Thus, sharp-tailed grouse, mule deer, and pronghorns are referred to consistently throughout the document.

The majority of private and State inholdings are unfenced and in common with other land in the allotments administered by FWS, COE, or BLM. Livestock stocking rates on these inholdings are determined by the landowner or operator as long as they are consistent with recognized livestock carrying capacities determined by a valid range survey and the season of use is the same as the rest of the allotment. If the owner or operator wishes to deviate from the grazing pattern of the allotment, the land must be fenced or other measures taken to ensure the operations do not affect the majority landowner.

A mission statement and long range goals for CMR were approved by the FWS Regional Director in September 1978. Refuge mission and goals were developed in accordance with existing laws, executive orders, and policies that guide the National Wildlife Refuge System.

CMR Mission:

The mission of CMR is to preserve, restore, and manage in a generally natural setting a portion of the nationally significant Missouri River breaks and associated ecosystems for optimum wildlife resources and provide compatible human benefits associated with its wildlife and wildlands.

CMR Goals in Priority Order:

- 1) Attain and perpetuate a balanced, natural diversity of plant and animal communities favoring endangered or threatened species, then all other native species, and finally desirable exotics.
- 2) Provide the habitat and necessary resources for recovery or reintroduction of species endangered or threatened with extinction, as recommended by approved recovery plans.
- 3) Protect and maintain Congressionally established wilderness areas and state and nationally designated historic, cultural, and natural areas and objects unique to the Missouri River breaks.
- 4) Restore and maintain habitat and other conditions necessary to sustain optimum populations of mammals and nonmigratory birds.
- 5) Manage migratory bird habitats first for production and then for use during migration.
- 6) Preserve and protect the integrity of the nationally significant Missouri River breaks ecosystem.
- 7) Protect and maintain the natural resources of the Missouri River upstream from the Fred Robinson Bridge to complement and enhance the nationally designated Upper Missouri National Wild and Scenic River.
- 8) Provide grazing for domestic livestock when compatible with wildlife and habitat goals.
- 9) Provide public understanding and appreciation of the fish and wildlife, recreational, cultural, and scenic resources on CMR through high quality programs in environmental education, interpretation, wildlife observation, hunting, fishing, and other forms of wildlife-oriented recreation when compatible with wildlife goals.
- 10) Demonstrate and contrast management of wildlife through natural ecological processes, areas managed for maximum wildlife abundance and diversity, and areas managed especially for compatible public uses of wildlife and wildlands.
- 11) Coordinate and integrate, where feasible, management of CMR with objectives of federal and state agencies and private landowners within and around CMR.

All alternatives must also address the wildlife, range, and recreation objectives approved for CMR that evolved from its mission and goals. These are:

Wildlife Objectives in Priority Order:

- 1) Reintroduce peregrine falcons and maintain two eyries by 1990, and a third by the year 2005.
- 2) Maintain habitat for and reintroduce a minimum of six pairs of black-footed ferrets on six or more prairie dog towns when animals are available.
- 3) Maintain existing migration habitat for bald eagles and determine feasibility of establishing a breeding population.
- 4) Improve and maintain sharp-tailed grouse habitat and habitat for associated species in good to excellent condition in the ponderosa pine-juniper, juniper, and grass-deciduous shrub types on suitable areas to support 30 spring breeding birds/mi² (males and females) by the year 2005 when weather, predation, life cycles, or other natural factors permit.
- 5) Improve and maintain pronghorn winter habitat in good to excellent condition on suitable sites in the juniper and sage-grassland types to support 1,500 wintering animals by the year 2005.
- 6) Improve and maintain riparian habitat on the Missouri and Musselshell Rivers and other suitable riparian areas in good to excellent condition by the year 2005 to benefit wildlife species such as white-tailed deer, raccoons, beaver, waterfowl, kingbirds, mourning doves, elk, American kestrels, ring-necked pheasants, and turkeys.
- 7) Improve and maintain mule deer habitat on the refuge in the sage-grassland, ponderosa pine-juniper, and grassland-deciduous shrub vegetative types in good to excellent condition to support over-wintering populations of 10 deer/mi² by the year 2005, in a manner that will also benefit sharp-tailed grouse.
- 8) Maintain viable prairie dog towns covering between 5,000-10,000 acres on suitable areas with sizes and patterns desirable for black-footed ferrets. Learn the habitat requirements for species of special interest and concern that live on or in proximity to these prairie dog towns.
- 9) Maintain elk habitat in good to excellent condition and improve security cover to a level₂ capable of maintaining a population of 2.5 over-wintering elk/mi² in the coniferous and closely associated grassland communities by the year 2005. Minimize crop depredation on private lands.
- 10) Improve waterfowl habitat to good or excellent condition on all suitable ponds.
- 11) Reintroduce Rocky Mountain bighorn sheep and swift fox into suitable habitat.

Range Objectives:

- 1) Improve range condition and enhance productivity and stability of soil resources to complement wildlife objectives.
- 2) Provide forage beyond the needs of wildlife to domestic livestock where environmental limitations do not preclude such use.
- 3) Provide stability and support to livestock users and their operations consistent with wildlife objectives.

Recreation Objectives:

- 1) Identify, preserve, and protect all cultural resource values in accordance with public law.
- 2) Continue to provide opportunities for the public to enjoy sport hunting, fishing, and other wildlife/wildlands-oriented recreation, including interpretation and environmental education compatible with wildlife objectives and the overall refuge mission.
- 3) Continue other agency management of developed recreation areas for nonwildlife-oriented recreation, compatible with wildlife objectives.

ALTERNATIVE A

(No Action)

ENDANGERED OR UNIQUE SPECIES

Endangered or unique species management would comply with existing federal laws and regulations. Ongoing management actions consist of bald eagle surveys, black-footed ferret sign searches, preparation for possible peregrine falcon reintroduction, and law enforcement.

HABITAT MANAGEMENT

Wildlife surveys on CMR would consist primarily of aerial and ground surveys to determine pronghorn, deer, and elk distribution, deer and elk population levels, sage and sharp-tailed grouse display ground locations, and population levels, waterfowl production, colonial nesting bird production, beaver population trends, coyote densities, and prairie falcon and golden eagle use.

Nest structures for geese and five goose and duck brood ponds would be maintained near the old Slippery Ann headquarters. A second set of goose ponds would be maintained at Fort Peck. A few scattered water developments would be constructed and maintained for wildlife and livestock, and suitable ponds stocked with fish.

The existing small cooperative farming program on the Missouri River bottomlands in the west unit would be continued. Farming would be conducted on a sharecrop basis with one-third left for wildlife needs. Habitat conditions would be monitored by vegetative sampling.

All wildfires would be suppressed as soon as possible following discovery. Those that could be reached by vehicle would be fought with hand crews. Aerial retardant would be used if ground crews were ineffective. An exception to this policy would pertain to northern Petroleum County where fires would be allowed to burn so long as they remained confined to the drainage in which they originated. No prescribed burning would be used in this alternative.

Fisheries management would consist of cooperating with the MDFW&P in stocking fish and enforcing regulations.

FWS would control predators to reduce livestock depredations on a case-by-case basis upon request of the livestock operator and confirmation of damage. No prairie dog or other small mammal control would occur on the refuge except for human health and safety purposes. Prairie dog control would be considered where refuge lands adjoin other landowners as a last resort when they are causing problems to the landowner. No coyote control would occur to protect other wildlife.

FORAGE ALLOCATION

Livestock grazing would remain at current levels. Total federal livestock Animal Unit Months (AUMs) would be maintained at 60,108 with

3,524 in a nonuse status. Vegetation for wildlife used for food, residual cover, or other habitat needs would total about 50,000 AUMs. There would be a light increase in total forage available for wildlife and livestock on a refuge-wide basis totaling approximately 110,000 AUMs by 1985.

RANGE DEVELOPMENTS

Range improvements would continue at present levels with limited maintenance or new construction scheduled.

RECREATION AND CULTURAL RESOURCES

There would be minor improvements in existing recreation facilities. The 21-mile reach of the Missouri River downstream from the Upper Missouri National Wild and Scenic River, between Fred Robinson Bridge and headwaters of Fort Peck Reservoir, would continue to receive limited recreation use.

Some improvement of the visitor contact station at Fort Peck would occur, and wildlife pastures at Fort Peck would continue to be maintained by COE.

Periodic maintenance of the existing self-guided wildlife tour route near Slippery Ann would occur. Existing access roads and recreation areas would be retained with limited maintenance or minor improvements. Private cabins would be retained.

Elk and pronghorn hunting would be on a limited (permit) basis while hunting for deer, upland game, and waterfowl would be open to all license holders. The use of free elk archery permits would be continued to collect data on archery hunting. No aerial hunting for coyotes would be allowed. All fishing and hunting would be in accordance with state regulations, formulated cooperatively by MDFW&P and CMR personnel.

MITIGATING MEASURES

Small scale fencing could occur on intermittent and continuous streams, ponds, and draws to improve riparian habitat and shrubs. The only other mitigating measures would be to select all or portions of the Proposed Action, Intensive Wildlife Management, or No Grazing alternatives.

ALTERNATIVE B
(Proposed Action)

OVERVIEW

The planning process was guided by the dual agency administration of FWS and COE (Appendix 13), the Executive Order establishing CMR (Appendix 4), national policy, information provided by the public, and long-range CMR goals. The planning process used for CMR is outlined in Appendix 1b. The Proposed Action is considered to be a practical solution that provides almost all of the wildlife habitat benefits of any of the alternatives. These benefits would take longer to occur, but could lessen off-refuge impacts. Considering the dual jurisdiction and land ownership patterns, it appears to be the most reasonable alternative.

The following constraints were established by FWS to govern the Proposed Action. To the extent these constraints are imposed by policy and not legislation, they are subject to change through public evaluation of the EIS.

- 1) FWS funds will not be spent for livestock where wildlife benefits cannot be identified in the process.
- 2) Water developments, fencing, farming, etc., are generally inconsistent with wildlife goals and will only be used when wildlife objectives cannot be accomplished through other measures.
- 3) Restoration practices such as shrub planting are consistent with wildlife objectives.
- 4) Insofar as possible, FWS will coordinate and standardize CMR livestock grazing systems, stocking rates, and seasons of use with adjacent landowners in common allotments as long as this does not prevent FWS from carrying out its mandates.
- 5) Public hunting, fishing, and trapping are appropriate uses of CMR lands as long as they are consistent with CMR's objectives.

GENERAL

Passage of Public Law 94-223 in 1976 solved the past jurisdictional problems with the BLM. Also, a Memorandum of Agreement was signed by the COE and the FWS in 1979. The Agreement was signed to ensure that both agencies coordinate all future planning activities on the Charles M. Russell National Wildlife Refuge. Joint management by agencies with differing legislative mandates creates potential for conflict; therefore, efforts would continue to simplify overlapping jurisdiction and eliminate potential problems.

The Proposed Action alternative would reach and maintain the refuge objectives. A 33 percent average reduction in grazing would occur by 1990. Generally, the refuge would be prescription grazed on a seasonal basis at light livestock stocking levels and the response of wildlife habitat closely monitored. If wildlife objectives were not being accomplished, additional changes in grazing would be implemented on specific areas not responding. These actions would include further reductions or increases in AUM's allocated to livestock, changes in seasons of grazing use, and other changes.

It is estimated that it will take 5-15 years depending on the weather conditions and site characteristics before adequate information is available to make these changes or estimate impacts.

ENDANGERED OR UNIQUE SPECIES

Two peregrine falcon reintroductions would be made at suitable sites, and six pairs of black-footed ferrets and several pairs of swift fox would be reintroduced on selected prairie dog towns as animals become available. No known source of black-footed ferrets exists at present. Twenty to thirty bighorn sheep would be introduced at selected sites. Introductions would continue as necessary to establish viable populations.

HABITAT MANAGEMENT

An essential undertaking would be preparation of a habitat management plan for each allotment by 1990. These plans would spell out specific wildlife habitat problems and provide specific management actions to correct the problems, such as grazing seasons of use, prescribed burning, planting, and rest from grazing if necessary. Evaluation of wildlife habitat on a periodic basis to determine whether wildlife objectives were being met in a suitable time frame would occur. This would be coordinated with BLM in joint pastures. It is recognized that BLM and FWS have different management objectives for livestock grazing. Fences would be constructed where necessary to achieve each agency's objectives. The location of these fences would be determined after consultation between concerned parties when habitat management plans are written for each allotment. Approximately 50 miles of boundary fence have presently been identified and are discussed further in range developments. Additional fencing may be required. These fences would not necessarily be on the refuge boundary. They could be constructed in the best and most practical locations. Other possibilities would be to locate new water facilities or implement specific grazing systems designed to reach each agency's objectives in suitable common allotments.

The Habitat Evaluation criteria (Appendix 2) would be upgraded as more information becomes available. In addition, various sampling techniques would be established to monitor at prescribed intervals long-term changes in habitat and range conditions. Different treatments or grazing capacities would be employed if these evaluations indicated that wildlife objectives were not being reached. Other management surveys would be as described under the No Action alternative.

The most significant management actions to achieve habitat objectives would be reductions of livestock grazing, changing livestock seasons of use, and habitat treatment practices such as prescribed burning. Overall proposed livestock levels would be approximately 33 percent below current federal AUM levels on the refuge. Livestock grazing would be utilized on a prescription basis, as required, to maintain existing plant communities at desired habitat conditions.

Deciduous shrub quantity and quality would be increased by prescribed burning of 1,900 acres by 1990, and a total of 7,700 acres by the year 2005. Planting would be done on 100 acres by 1990, and a total of 500 acres by the year 2005. Habitat analysis indicated deciduous shrub communities are in short supply on the refuge, and historical accounts indicate shrubs were once more abundant than they are today. A combination of actions would be taken to improve the present situation. Although a better shrub community could be attained, it would not be luxuriant, as CMR does not have the potential, with limited exceptions, to provide such communities. The aforementioned habitat management plans would determine the best means of re-establishing shrubs on each allotment. Management actions would probably be adjustments in grazing, burning, and planting, in that order. Shrubs would be planted to re-establish a seed source for natural revegetation. It is estimated that this would involve approximately 25 acres/year depending on success of grazing adjustments and burning.

Following burning or planting, there would be no grazing allowed for two to three years or longer, if necessary, to ensure successful establishment of the desired vegetation.

Cooperative farming and haying would be phased out in the bottoms along the Missouri River to restore natural river bottoms. Lure cropping would be tried on the east end to decrease elk depredation on adjoining private croplands. Six miles of fence enclosing about 900 acres would be constructed from 1980-2000 to protect selected riparian zones from livestock and enhance shrub reproduction.

Since actions to be undertaken would be constrained by the interspersed ownership of federal, state, and private lands, several priority land purchases totalling approximately 2,000 acres would be attempted on a willing-seller basis by 1990. Additional purchases would occur as money becomes available. Two allotments would be changed from domestic sheep to cattle use by 1990. These allotments are located in the potentially best pronghorn range on the refuge, but where pronghorn habitat components are depressed. Domestic sheep would be eliminated from the refuge unless needed on a prescription basis to manipulate vegetation.

A policy for fire management would include the following points: 1) no prescribed burning on most shale and badlands sites; 2) no prescribed burning along the refuge boundary when opposed by adjacent owners; 3) little or no prescribed burning on slopes in excess of 40 percent; 4) prescribed burns of 10-40 acres each on the west half of the refuge; 5) suppress all fires in coniferous communities on the eastern portions of the refuge where conifers are limited in extent; 6) suppress wildfires in identified critical elk calving, sage grouse, and mule deer winter habitats where fire may destroy desirable habitat components; 7) rehabilitate wildfire burns by planting native browse species on suitable sites when necessary; 8) attempt to suppress wildfires in close proximity to recreation areas where recreation values may be jeopardized; and 9) generally attempt to limit wildfires to 10-40 acres in dense timber which is an optimum size burn for deer and elk. This size burn may be impractical due to topographic and other factors. Burn sizes may actually be 80-100 acres or more.

Fisheries management would consist of cooperating with MDFW&P in stocking programs and enforcement of fishing regulations while trying to protect water courses and revegetate any streambanks in poor condition.

Predator control to reduce livestock losses would be the same as the No Action alternative. Coyote control to benefit other wildlife species would occur as a last resort as stated in the Final EIS for Operation of the National Wildlife Refuge System. Several methods of control are listed with killing of coyotes last. Small mammals would be controlled only if a health hazard was apparent. Prairie dog control would also be the same as the No Action alternative pending outcome of an ongoing study.

FORAGE ALLOCATION

Livestock grazing on CMR would be substantially reduced to improve habitat conditions for wildlife. Proposed livestock grazing levels would be 40,482 federal AUMs by 1985, which represents a 33 percent average reduction from present federally licensed AUMs. This reduction would range from 0-100 percent depending on the allotment (Appendix 5). Three small livestock allotments would be eliminated, and four allotments would be incorporated as pastures into other allotments leased by the same permittee.

Each allotment was examined in terms of existing range conditions (Appendices 8 and 9), slope and water factors (Appendix 15), and soil limitations (Appendix 7). Concurrently, wildlife habitat conditions (Appendix 2) were evaluated by allotment and deficiencies noted. In the majority of the areas where habitat evaluation demonstrated existing livestock/wildlife conflicts, slope/water factors and soil limitations provided the necessary grazing change. In the remaining areas where habitat deficiencies affected by livestock grazing still remained, grazing was adjusted to allow the achievement of applicable wildlife objectives. This process determined that light grazing (0-35 percent utilization), coupled with various seasons of use, would achieve the diversity of habitat conditions mandated by the refuge goals and objectives.

Most livestock grazing would continue to be on a seasonal (winter, spring, summer, fall, or combination thereof) basis, although spring turn-in dates would be later and grazing reduced to light stocking levels. Prescription grazing would be employed as a management tool to provide certain habitat conditions to benefit a particular wildlife species.

In general, there would be no early spring use in allotments. Turn-in dates for livestock would be delayed until significant conflicts with wildlife would be avoided (late spring).

Several allotments have been identified as possessing potential for combination into deferred rotation systems with BLM, state, and private landholders. Early spring use in existing pastures would be rotated with other pastures inside or outside CMR to eliminate spring use in the same pastures on a recurring annual pattern. Close cooperation, especially between BLM and FWS, would be needed on common pastures to ensure successful implementation of any deferred grazing systems.

Changes in one and possibly two existing rest-rotation systems would be considered. Two allotments with rest-rotation systems were identified which are not providing desired results in terms of habitat values. Recommendations made by Hormay (1980) would be considered when management plans for the allotments are written. Periodic evaluations of how these grazing systems are providing desired habitat quality for wildlife will ultimately determine the degree to which rest-rotation would be used as a viable grazing system on the refuge.

Generally, the other allotments with deferred and rest-rotation grazing systems would remain intact to provide a rest period during a portion of the grazing sequence with grazing commencing at different dates in succeeding years in a given pasture. Early spring use would be avoided as much as possible on these allotments because of soil erosion problems. Present turn-in dates would not be substantially affected under deferred or rest-rotation systems of use so long as the same pastures would not be grazed at the same time each year.

In years of below average forage, production due to drought, fires, insects, or other natural causes, grazing permits may be suspended in whole or in part as necessary to minimize damage to range and wildlife resources.

RANGE DEVELOPMENTS

Most grazing allotments on CMR adjoin unfenced state and BLM land. Preparation of habitat management plans would involve intensive coordination with other landowners, especially BLM, to determine specific management actions necessary to meet the individual landowner's objectives. Boundary fences would be built where necessary. Fences would be 42 inches high, 3-strand, with 12 inches between wires. The bottom wire would be 18 inches above the ground and smooth in areas where pronghorns would likely encounter fences.

So far, approximately 50 miles of fencing needs have been identified along the CMR boundary to keep livestock numbers within authorized levels. Fencing would occur in a minimum of six allotments by the year 2000. Other portions of the boundary would be fenced if problems arise regarding unauthorized livestock use. A limited amount of interior fence would be built.

New water development projects would be limited for facilities that enhance watershed, wildlife, and recreation programs; however, no allotment will be left without water. A need for three new stock ponds plus one pipeline and several troughs has been identified. Periodic maintenance of existing range developments would occur on an as-needed basis.

RECREATION AND CULTURAL RESOURCES

Public access would be provided to various portions of CMR (Figure 1), and water access by boat and plane throughout the length of the refuge would be stressed.

Among new programs would be enhancement and preservation of the Missouri River below the nationally designated segment from Fred Robinson Bridge to headwaters of Fort Peck Reservoir. The FWS, COE, and MDFW&P

will coordinate to ensure the best possible fishery management within the primary COE mandates of flood control, navigation, irrigation, and power generation.

A cooperative management plan would be prepared with BLM, COE, and MDFW&P for the Slippery Ann area by 1990. Of special concern would be nearby sites that could replace or complement James Kipp State Park which is periodically flooded, the existing wildlife tour route, enhancing opportunities to view wildlife, needed provisions for accommodating floaters who use the Upper Missouri National Wild and Scenic River, and an interagency visitor contact-interpretive center. Visitor contact stations would be constructed at Fort Peck, Malta, and Lewistown in cooperation with other interested agencies such as COE, BLM, MDFW&P, and Montana Department of State Lands (MDSL).

A historic tour route would be designated along the Sand Creek trail south of the Missouri River. Various historic buildings and sites located along this route would be marked and interpreted.

A scenic tour route following the existing Knox Ridge road would focus attention on the Missouri River Valley and its associated wildlife.

Certain lands such as research natural areas, paleontological areas, islands, and special wildlife areas would be identified as environmental education study areas for use by various institutions and organizations. York Island, a site on Fourth Point, and a limber pine community near Hell Creek State Park, would be recommended for research natural areas on the eastern portion of the refuge because of their unique plant communities. A coniferous forest community lying east of the mouth of Two Calf Creek on the west portion of the refuge would be recommended for a research natural area because of its vegetative features.

From Fred Robinson Bridge to Crooked Creek Recreation Area, a 50-mile self-guided canoe trail (about 25 miles along the undesignated free-flowing segment of the Missouri River and another 25 miles from headwaters of Fort Peck Reservoir to Crooked Creek) would be established, paralleling the route followed by Lewis and Clark. Where possible, natural, historic, and other features would be interpreted along the route.

A 140-mile sail-powerboat tour route would be designated on Fort Peck Reservoir, connecting existing and proposed major recreation areas. In addition to a brochure describing the route and points of interest along the way, signs and markers would be placed at campsites and boat access areas along the shore.

At appropriate locations on the refuge, exhibits would be provided to explain wildlife, geologic, historic, and related features.

As recreation demands and needs dictate, approximately 30 miles of backcountry (nonmotorized) and nature trails would be designated at several locations. These trails would be self-guiding or could be used as part of a guided interpretive program.

As with the No Action alternative, wildlife pastures would continue to be maintained by COE at Fort Peck. Interpretation of the wildlife display pastures would be integrated with the visitor contact station at Fort Peck.

CHARLES M. RUSSELL
NATIONAL WILDLIFE REFUGE
ENVIRONMENTAL STATEMENT

RECREATION PROPOSALS



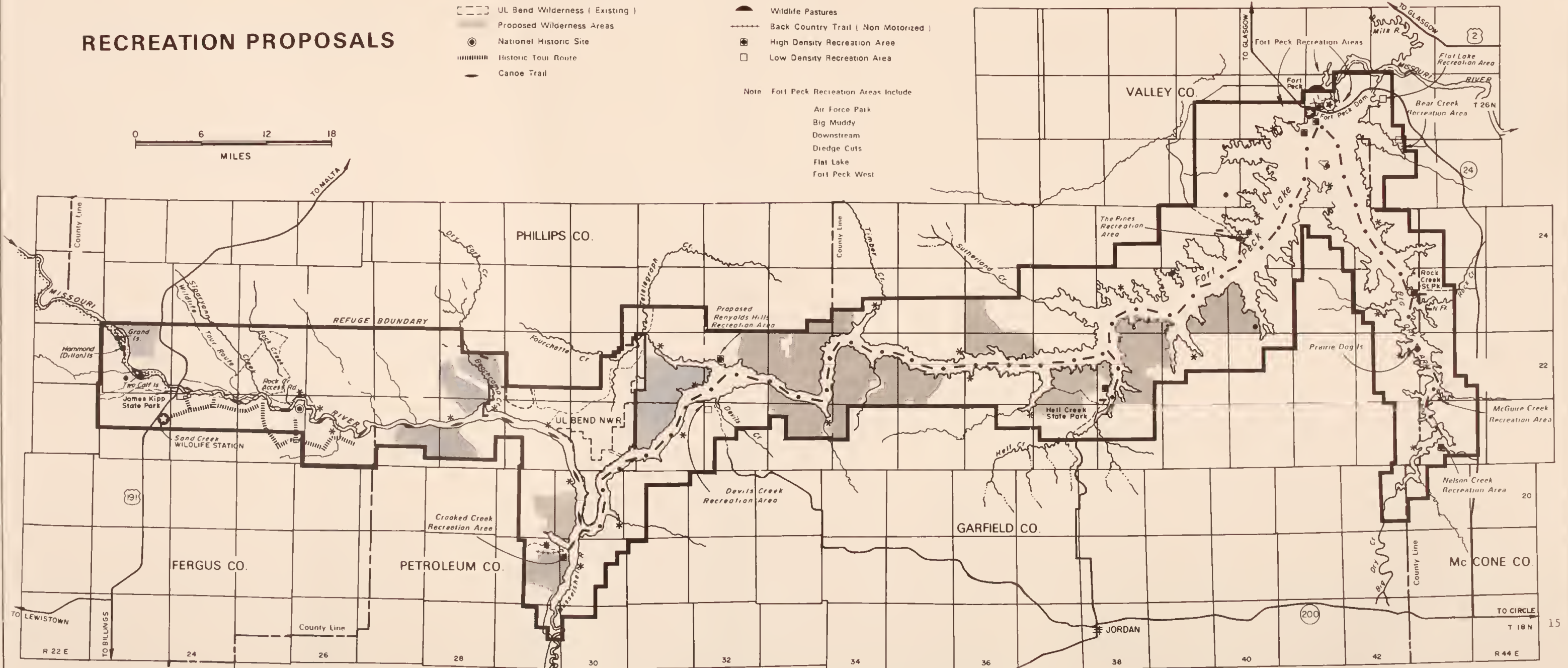
- LEGEND**
- ★ FWS Headquarters
 - ★ Corps of Engineers Headquarters
 - Private Cabins
 - Research Natural Area
 - Upper Missouri National Wild and Scenic River
 - UL Bend Wilderness (Existing)
 - Proposed Wilderness Areas
 - National Historic Site
 - Historic Tour Route
 - Canoe Trail
 - >>> Free Flowing River Preservation
 - — Sail / Power Boat Tour Route
 - Refuge Transportation System
 - * Sport Fishing Access
 - Knox Ridge Scenic Tour Route
 - * Nature Trail
 - Wildlife Pastures
 - Back Country Trail (Non Motorized)
 - High Density Recreation Area
 - Low Density Recreation Area

Note: Fort Peck Recreation Areas include:

Air Force Park
Big Muddy
Downstream
Dredge Cuts
Flat Lake
Fort Peck West



FIG. 1 RECREATION PROPOSALS



Existing private cabin areas would remain, and no new cottage areas would be developed.

All existing roads and trails including those that have been closed would be periodically evaluated to determine those that should be improved, realigned, or closed. Established roads would be marked to guide visitors. Cooperative agreements would be negotiated with affected agencies to ensure that connecting roads outside CMR were maintained.

Where compatible with wildlife and in consultation with COE, areas for float plane landings on Fort Peck Reservoir would be established as needs dictate.

An additional boat launching, camping, and fishing access site would be developed at Fourchette Bay on the north side of the reservoir. As demands increase, facilities would be expanded by COE at existing recreation areas. Some access roads leading to these sites would be improved.

Wildlife populations would be harvested within the capacity of the resource. Primitive sport fishing access sites would be provided at a number of locations throughout the refuge.

Qualified cultural structures and sites would be officially designated through nomination to the National Register of Historic Places or to other appropriate lists. Surveys of the areas would be conducted to comply with Executive Orders or legislation as funding and manpower permit.

MITIGATING MEASURES

If wildlife objectives were not being accomplished under the Proposed Action, several courses of action would be available. As ranches were sold, grazing privileges could be retired across CMR until approximately 15-20 no-grazing areas were established. These no-grazing areas would be used by cattle from other actively grazed allotments needing rest to produce desired vegetation. Once accomplished, this would contribute to the objective of stabilizing livestock use. In drought years, some use could be made of these areas when the normally grazed areas would not produce enough vegetation for wildlife and livestock. If constraints listed at the beginning of this alternative were softened to allow construction of stock ponds, fencing, and other management facilities, options would be available to mitigate some impacts on individual ranchers as well as allow suitable farming and still reach or exceed wildlife objectives. Presently, however, stock ponds, fencing, and farming are generally inconsistent with refuge goals and are not available as mitigating measures. If these options were available, ponds at heads of draws would be fenced, eliminating trampling of shrubs by livestock.

Another measure would be to fence riparian zones (intermittent streams, river banks, and reservoir shorelines) where desired results were not being obtained. These have traditionally been considered as sacrifice areas on CMR due to concentrations of livestock that occur from normal grazing operations. To restore and maintain all important riparian areas without fencing, livestock grazing would have to be eliminated in the entire allotment where it occurs (Hormay 1976).

Minimal farming on the uplands and some bottoms, if done properly, could benefit some wildlife on CMR, especially turkeys, ring-necked pheasants, white-tailed and mule deer, elk, sharp-tailed grouse, raccoons, gray partridge, waterfowl, sage grouse, white-tailed jackrabbits, and most seed-eating birds. This management practice is also not available due to the policy constraints placed on this alternative.

The areas needing wildlife habitat improvement on the refuge could be placed in a no-grazing category for several years, then grazed by livestock as stated in the proposal. This would improve habitat conditions in a shorter time period.

AUM reductions could be spread over a longer time period than five years which would reduce, but not eliminate, impacts to some livestock operators using the refuge, but would delay wildlife habitat improvement.

Any new facility construction to improve wildlife habitat, range resources, or recreation quality would be carefully evaluated to ensure that all site limitations are known and considered before construction is attempted.

Should recreation activities result in significant conflicts with wildlife, the FWS will coordinate with other agencies to resolve the problem.

ALTERNATIVE C

(Intensive Wildlife Management)

GENERAL

This alternative involves several interrelated components: reducing grazing to approximately 27,000-30,000 AUMs, purchasing inholdings to control grazing, removing private cabins, and intensive wildlife habitat manipulations. Under this alternative, AUMs would only be allocated to livestock as needed for vegetative manipulation to benefit wildlife. Conflicts that arise with the COE concerning the removal of private cabins will be coordinated and resolved in compliance with the Memorandum of Agreement between the COE and FWS (see Appendix 3, page 158). Many private inholdings would be purchased and arrangements made with SLB to trade, lease, and possibly sell key state lands. Approximately two-thirds (290 miles) of the refuge boundary (400 plus miles) would be fenced. Intensive wildlife habitat manipulation proposals such as fencing, farming, and pond development would require modification of planning policy constraints for CMR (see page 9, paragraph 2).

ENDANGERED OR UNIQUE SPECIES

Reintroduction of peregrine falcons, black-footed ferrets, swift fox, and bighorn sheep would occur as in the Proposed Action alternative. Bison would be introduced at UL Bend on 30-35 sections of enclosed land.

HABITAT MANAGEMENT

Management surveys would be conducted similar to those proposed under the No Action alternative with slight expansion in number of species sampled and intensity of sampling. Facilities for geese at Slippery Ann and Fort Peck would be maintained. Additional waterfowl production areas at UL Bend would be created through damming natural runoff water into 34 ponds and associated wetlands totaling approximately 900 acres.

Habitat analyses would be conducted as stated under the Proposed Action alternative.

Livestock grazing would be used as a management tool on a prescription basis to remove rank vegetation or to alter vegetation to reach desired habitat conditions for wildlife. Extensive burning, planting, prescription grazing, and cultivating suitable land would be the main management tools under this option. To implement this grazing pattern, many private and state inholdings would be acquired. At present, the majority of inholdings are unfenced. Fencing some of the isolated parcels would be impractical and expensive if private and state lands were to be retained under present ownership and grazing practices.

Shrub quantity and quality would be increased from fair to excellent condition by burning 3,800 acres by 1990, and a total of 15,000 acres by the year 2005. It is estimated that shrub planting would be carried out

on 800 acres by 1990, and on a total of 3,000 acres by the year 2005. In addition, intensive farming would be conducted on approximately 2,000 acres of land to provide food interspersed with shelterbelts and other cover for deer, upland birds, elk, and other wildlife. This would include substantially increasing farming in some river bottoms and other suitable areas to increase the food supply for white-tailed deer as well as many other riparian species. Some small but important riparian zones across CMR would be excluded from big game use by temporary fencing. This would allow these zones to revegetate and provide excellent quality habitat at which time the fencing would be removed.

Elk lack adequate security cover from Timber Creek (west) to Fort Peck; this would be corrected by planting ponderosa pine at various locations. Fire management would be the same as the Proposed Action alternative.

Fisheries management would include stocking and regulations enforcement as outlined in the Proposed Action alternative as well as protecting water courses and revegetating impoverished areas. In addition, some bays would be diked off to establish littoral vegetation for spawning, and concrete spawning runs would be established for use by salmonids.

Control of predators to protect livestock and control of prairie dogs would be the same as the No Action alternative. Coyote and small mammal control to benefit other wildlife species would occur as a last resort as stated in the Final EIS for Operation of the National Wildlife Refuge System (Fish and Wildlife Service 1976) and the Migratory Bird Program Management Document Goal #5 (Fish and Wildlife Service 1980).

FORAGE ALLOCATION

Livestock grazing would be employed as a tool to achieve or maintain desired habitat conditions. Generally, livestock would be grazed at moderate levels with alternate spring-summer use. Each year of use would be followed by two years of complete rest. Site specific treatments would vary depending on wildlife species' needs and the condition of the vegetation. Treatments would include specific grazing prescriptions, and other habitat treatments such as fire. Federal livestock levels grazed on an annual basis would be approximately one-third those presently authorized. About 23,000 AUMs would be provided for livestock use by 1990. Private and state inholdings would be acquired as they became available. Wildlife would receive about 87,500 AUMs by 1990 to fulfill habitat needs.

By the year 2005, there would be an estimated maximum of 27,000-30,000 livestock AUMs grazed on CMR annually. Wildlife would receive about 107,000 AUM's for food and habitat enhancement.

RANGE DEVELOPMENTS

Range improvements would be limited to approximately 290 miles of boundary fence to regulate livestock. Interior fencing would be removed in smaller pastures, and water facilities would be maintained where

needed. Range improvements such as fences or ponds on marginal sites having soils, geological hazards, or wildlife conflicts would be removed or allowed to deteriorate. Soil ripping would occur on nearly all suitable sites (38,000 acres) on the refuge, with the exception of wilderness areas, to improve wildlife habitat and reduce soil erosion.

RECREATION AND CULTURAL RESOURCES

This alternative is similar to the Proposed Action alternative for recreation. However, there would be a somewhat lower level of public use and facility development.

Unlike the Proposed Action alternative, no backcountry (nonmotorized) trails would be developed, and only nature trails would be provided.

Private cabins presently situated on CMR at The Pines, Fort Peck, Rock Creek State Park, and Hell Creek State Park would be removed as the leases terminate. The areas would be rehabilitated into suitable wildlife habitat.

There would be no development of low density recreation areas; additional fishing access sites would be provided instead. Existing high density recreation areas would be expanded by COE as needs dictate. Any recreational uses or activities conflicting with normal wildlife activities would be controlled by excluding such use during critical seasons.

Any new facility construction to improve wildlife habitat, range resources, or recreation quality would be carefully evaluated to ensure that all site limitations are known and weighed in terms of whether or not the proposed construction would be feasible.

MITIGATING MEASURES

Retirement of all livestock grazing in a given area could be employed if competition with wildlife is determined to be a limiting factor affecting a wildlife species.

Gradual reductions in the livestock grazing program would soften impacts of reduced livestock levels on individual operators, but would delay wildlife habitat improvement.

ALTERNATIVE D

(Multiple Use)

GENERAL

This alternative would not be possible to implement unless Congressional action changed CMR from a national wildlife refuge to a multiple use management area.

ENDANGERED OR UNIQUE SPECIES

Reintroduction of peregrine falcons, swift fox, and bighorn sheep would occur as in the Proposed Action alternative. One or more pair of black-footed ferrets would be reintroduced, if they became available.

HABITAT MANAGEMENT

Management surveys would continue as described in the No Action alternative, as would development of areas for geese at Slippery Ann and Fort Peck. Waterfowl ponds and nesting structures would be expanded at UL Bend through damming of natural runoff waters to include 34 ponds and associated wetlands totaling about 900 acres.

Grazing would be initially reduced, and then gradually increased over current levels as range conditions improve and portions of the riparian zone along the Missouri River would be grazed on a prescription basis. Cooperative farming would continue as described under the No Action alternative or be increased.

Predator control to reduce livestock losses would occur under the same guidelines as on adjacent land, including aerial gunning. Prairie dog control would be as stated under No Action. Other small mammal control would be as stated under Intensive Wildlife Management. Coyote control to protect other wildlife would be as stated under the Proposed Action.

FORAGE ALLOCATION

Livestock would receive approximately one-half the allocated forage. Initially, there would be temporary reductions in present livestock AUMs from 56,000 active to 52,000. The Rock Creek ungrazed area would be opened to livestock grazing. Temporary livestock nonuse of allotments in deteriorated condition and soil ripping of all suitable panspots and dense clay sites would provide a forage increase of several thousand AUMs for livestock and wildlife over present levels because of improved range conditions. Wildlife would ultimately be allocated about 60,000 and livestock 61,000 AUMs on federal lands within the refuge.

RANGE DEVELOPMENTS

As many as 12 additional allotments would have new grazing systems implemented by the year 2005. The six allotments presently in rest-rotation systems and the three deferred rotation systems would be maintained.

Range improvements such as fencing, water development, or mechanical treatment of soils would be based upon allotment needs.

RECREATION AND CULTURAL RESOURCES

All recreation proposals discussed in the Proposed Action alternative would occur. In addition, a backcountry foot and horse trail extending the length of CMR on the north side of the Missouri River would be designated. This trail would provide the closest land route paralleling the historic Lewis and Clark trail. Some primitive campsites would be located along this route, and historic and natural features would be interpreted. The trail would be nominated as a component of the Lewis and Clark National Historic Trail upon completion of a comprehensive plan for the historic trail by the National Park Service.

A perimeter shoreline scenic road extending 21 miles along the north shore of Fort Peck Reservoir on the east side of the refuge would be constructed. The road would be built by COE near the lakeshore to provide optimum viewing opportunities. Primitive campsites would be established at a number of locations throughout the refuge. High and low density recreation areas described for the Proposed Action alternative would be expanded as needs dictate.

MITIGATING MEASURES

Fencing riparian zones and ponds where no rotation systems are employed would encourage development of riparian communities. Otherwise, vegetation in these important locations would not attain desired levels.

Implementation of several new rotation grazing systems on the refuge should provide some increased habitat quality and may eliminate the need to fence riparian areas in allotments with rotation systems.

Livestock allotments not meeting management goals could be placed in a nonuse status for as long as needed to achieve desired results. Operators would be required to accept nonuse or take use in another portion of the refuge.

Habitat manipulation treatments would be provided if needed to maintain a diversity of habitat conditions to favor certain wildlife species. The proposed levels of livestock grazing would limit wildlife habitat potential. An improvement would occur under this alternative, but the amount of improvement over present levels would be slight.

Any new facility construction to improve wildlife habitat, range resources, or recreation quality would be carefully evaluated prior to work initiation to ensure that all site limitations are known.

ALTERNATIVE E

(No Grazing)

GENERAL

This alternative would not be in compliance with Executive Order 7509. The Executive Order requires that excess forage be allocated to livestock, and this alternative allocates none. The purchase of all private and state lands would require changes in SLB policy and large increases in funding.

ENDANGERED OR UNIQUE SPECIES

Reintroduction of peregrine falcons, black-footed ferrets, swift fox, and bighorn sheep would occur as in the Proposed Action alternative.

HABITAT MANAGEMENT

Management surveys and habitat analyses would be implemented as stated under the Proposed Action alternative.

Prescribed burning of 11,300 acres would enhance vegetative productivity, particularly for forb and shrub species. In addition, 500 acres would be planted to shrubs, and six miles of temporary wildlife exclosure fence would be constructed around acreage totaling 960 acres; 2,000 acres would be cooperatively farmed. Ponderosa pine would be planted to fulfill elk habitat requirements. All private and state lands would be acquired through purchase or exchange.

Fire suppression would be as outlined in the Proposed Action alternative. Prescribed burning would follow guidelines described in the Proposed Action. Fisheries management would be as stated in the Proposed Action alternative.

Prairie dog and small mammal control would be the same as the No Action alternative. Coyote control would occur as required for the benefit of other wildlife species. There would be no predator control on the refuge to protect livestock as no livestock would be present. Predator control to reduce livestock losses on adjacent lands would be as stated in the No Action alternative.

FORAGE ALLOCATION

Livestock grazing would be reduced by about 10 percent annually through 1990 on federal lands. All federal AUMs would be retired by the year 2005. Private and state inholdings would be purchased or acquired through exchange, and these AUMs would be retired by the year 2005.

All forage produced beyond plant and soil resource needs would be available for wildlife food and cover. Range conditions would improve

substantially, and essentially, all the good condition range would be in excellent condition by the year 2005. This would provide wildlife food and cover.

RANGE DEVELOPMENTS

Range improvements would involve soil ripping as much as 10,000 acres of panspots and dense clay range sites to improve vegetative productivity for wildlife food and cover. A few larger reservoirs would be maintained for waterfowl production and, in some cases, fishing. Nearly all other range improvements would be removed or allowed to deteriorate. The refuge boundary would be fenced to prevent unauthorized livestock use. All fences would be constructed as stated in the Proposed Action alternative.

RECREATION AND CULTURAL RESOURCES

There would be no additional facility development or changes from the Proposed Action alternative.

Any new facility construction would be evaluated prior to work initiation to determine site limitations and whether or not the proposed project would meet the desired objective in view of known site limitations.

MITIGATING MEASURES

If habitat quality for wildlife species associated with several vegetative communities declined, treatments such as prescribed burning, chemical treatments with herbicides, or plowing could be employed to promote habitat diversity to benefit these species.

Gradual reductions in livestock levels would soften the impact upon livestock operators, but would delay wildlife habitat improvement. There would be no other mitigating measures to help the livestock operators.

COMPARISONS OF ALTERNATIVES

It must be recognized that a complex and controversial situation occurs at CMR due to Fort Peck Dam and Reservoir, state and COE recreation areas, the town of Fort Peck, private and state inholdings, and past management practices where livestock was equal or dominant to wildlife (the 1952-53 range survey allocated 62 percent of the total AUMs to livestock and 38 percent to wildlife).

The Proposed Action alternative would attain habitat objectives for wildlife refuge-wide by 2005. Moreover, elk and pronghorns would receive additional benefits as they move on the refuge for part of their life cycle. The refuge would be managed in a natural setting for the most part, with intensive wildlife habitat and range improvement programs held to a minimum. Livestock grazing would be permitted, generally, under a seasonal use basis at light stocking levels. Special prescription grazing would be used in those areas where light stocking rates were not satisfactory. Generally, this level of grazing has been determined to be consistent with wildlife objectives. The Proposed Action would be accomplished at moderate cost, with significant increases in wildlife values.

Although it is the most desirable for wildlife, the Intensive Wildlife Management alternative would reduce the naturalness of the refuge and be very costly to implement. Purchasing many of the private inholdings would be expensive, and a change in SLB policy to allow state land to be leased, exchanged, or sold would be required. FWS policy would be modified to allow intensive habitat manipulation such as farming, fencing, and pond development. Phasing out of private cabins would require resolution within the Memorandum of Agreement with COE.

Livestock would be utilized as a management tool to achieve desired habitat conditions and wildlife objectives by the year 2005 or before. However, consolidation of many inholdings into federal ownership would facilitate CMR management as a total refuge. Also, cooperative farming would provide key areas of increased diversity and food sources for wildlife.

As compared to the Proposed Action, changes in livestock numbers under Intensive Wildlife Management would not significantly enhance wildlife habitat unless all other proposed treatments were also provided. However, intensive developments as proposed by the Intensive Wildlife Management alternative are inconsistent with current policy constraints. On a dollar for dollar basis, the Proposed Action provides a greater benefit to wildlife than Intensive Wildlife Management. Wildlife objectives refuge-wide would be met or exceeded before the year 2005.

The Multiple Use and No Action alternatives do not provide a wildlife refuge situation. Livestock grazing would be equal to or above wildlife for resource allocations. While popular with area or regional residents, these alternatives fall short of accomplishing the wildlife habitat potential of CMR. Management under Multiple Use could occur only if changed by Congressional action.

The complete elimination of livestock from the refuge under the No Grazing alternative or severe reductions in the Intensive Wildlife Management alternative would likely cause wildlife habitat adjacent to the refuge to decline as livestock operators attempt to make up for forage no longer available from Federal lands by increasing stocking levels on private lands. Private land closures to public use, already a problem in the area, could be expected to accelerate, further jeopardizing farmer/recreationist/State/Federal relations. Land purchase and total fencing of the boundary would be expensive, and the additional benefits gained for wildlife would be slight. Wildlife objectives would be met or exceeded by the year 2005 for most wildlife species.

Recreation would continue with no major change or emphasis from present management under the No Action alternative. Under the other alternatives, there would be more emphasis on providing the public an opportunity to enjoy compatible wildlife recreation. Preservation of cultural resources in compliance with Executive Order 11593 would occur in all alternatives. Roads to recreation areas, additional fishing access sites, expansion of some existing recreation areas, development of a scenic tour route and interpretive facilities, and a new recreation area on Fourchette Bay are proposed for all but the No Action alternative. A notable difference under the Intensive Wildlife Management alternative would be the elimination of private cabins from the refuge. The Multiple Use alternative proposed additional recreation development. Except for the No Action alternative, participation in wildlife-oriented recreation activities would be expected to increase, as wildlife populations increase, due to the greater opportunities for viewing, photographing, and hunting. Due to the remoteness of the area, rising costs of fuel for transportation, the small increase in population that is projected, and competing recreation resources in the region, recreation use on CMR is not expected to significantly impact wildlife under any of the alternatives. Table 1 summarizes how the alternatives would impact the major areas of concern at CMR.

SOCIO-ECONOMIC COMPARISONS

None of the alternatives have a significant effect on income or employment in the six-county region. As Table 3 shows, net employment effects for all the alternatives involve changes (positive and negative) of less than 1 percent in employment. The net change in direct and indirect employment with the Proposed Action is a loss of seven workers in 1978-90 and two from 1986-2005.

The direct effect on the ranchers, while of greater significance than to the regional economy, is still relatively insignificant. As Table 3a illustrates, the Proposed Action results in only a 3 percent loss in gross income or sales. The reason for the lack of significance is that a majority of the ranchers are dependent on the CMR on an average for only 13 percent of their livestock forage. Direct losses in hired labor is less than five workers for any alternative.

The direct effect on the tourism dependent sectors (retail trade, services, and gasoline) from the change in recreation is positive for all alternatives, except Intensive Wildlife Management. Direct and

Table 1. Summary comparison of implementing various management alternatives on Charles M. Russell National Wildlife Refuge, Montana.

	No action	Proposed action	Intensive wildlife management	Multiple use	No grazing
Meet objectives					
Wildlife					
Range	No	Yes	Yes	No	Yes
Recreation	No	Yes	No	No	No
Habitat quality	No	Yes	Yes	Yes	Yes
Conifer community	0	0	+	0	+
Deciduous shrub communities	0	+	++	0	++
Residual cover (grasslands)	0	++	+++	+	+++
Riparian areas	0	+	++	0	++
Sagebrush-greasewood flats	0	+	+	+	-
Off-refuge impacts to wildlife habitat	0	-	-	0	-
Wildlife species					
Bighorn sheep	0	+	+	0	+
Elk	0	++	++	+	++
Mule deer	0	+	++	0	+
Prairie dogs	0	+	+	++	-
Pronghorns	0	+	+	+	+
Sharp-tailed grouse	0	++	+++	0	+++
Waterfowl	0	+	+++	++	+
Range condition	0	++	+++	+	+++
Livestock AUMs	0	-	-	+	-
Recreation use	+	++	++	+++	++

0 equals minimal change from present condition.

+, ++ or +++ equals an improvement in quality and/or quantity from present condition.

-, - or - equals a lowering in quality and/or quantity from present condition.

Table 1a. Direct plus indirect impacts of change in livestock production on sales and employment.

Management Alternatives		Changes in Sales from Current Use to Alternative Actions ¹	Input-Output Business Multiplier ²	Direct plus Indirect Change in Local Sales	Input-Output Employment Multiplier ²	Direct plus Indirect Change in Local Employment
PROPOSED ACTION	1990	\$- 347,000	2.67	\$- 926,490	.379x10 ⁻⁴	-13
	2005	- 352,000	2.67	- 939,840	.379x10	-13
INTENSIVE WILDLIFE MANAGEMENT	1990	- 725,000	2.67	- 1,935,750	.379x10	-27
	2005	- 641,000	2.67	- 1,711,470	.379x10	-24
MULTIPLE USE	1990	- 249,000	2.67	- 664,830	.379x10	- 9
	2005	- 79,000	2.67	- 210,930	.379x10	- 3
NO GRAZING	1990	- 567,000	2.67	- 1,513,890	.379x10	-21
	2005	- 1,122,000	2.67	- 2,995,740	.379x10	-43

1. Source: Linear programming analysis conducted in this study.

2. A type II multiplier which includes households (labor) as part of the interdependent local economy is applied to changes in livestock industry sales. The assumption that households respond part of their incomes in the local economy and that all of livestock output is exported out of the six county study region provides an upper bound on local impacts.

Comparisons

Table 2. Direct plus indirect impacts in tourist visits on sales and employment.

Management Alternatives		Change in Sales from Current Use to Alternative Actions 1	Input-Output Weighted Business Multiplier 2	Direct plus Indirect Change in Local Sales	Input-Output Weighted Employment Multiplier 2	Direct plus Indirect Change in Local Employment
Proposed Action	1990 2005	\$+ 92,040 + 276,120	1.77 1.77	\$+ 162,911 + 488,520	.383 x 10 ⁻⁴ .383 x 10	+ 4 +11
Intensive Wildlife Management	1990 2005	- 92,040 - 613,600	1.77 1.77	- 162,911 - 1,086,072	.383 x 10 .383 x 10	- 4 -24
Multiple Use	1990 2005	+ 368,160 + 1,043,120	1.77 1.77	+ 651,643 + 1,846,322	.383 x 10 .383 x 10	+14 +40
No Grazing	1990 2005	+ 153,400 + 337,480	1.77 1.77	+ 271,518 + 597,340	.383 x 10 .383 x 10	+ 6 +13

1 Source: Visitor days presented in Appendix Table 17a, in C.M. Russell National Wildlife Refuge Draft E.I.S. Table 17-A, Appendix. Estimated by subtracting visitor days for "no action" from visitor days for the various management alternatives and multiplying the difference by \$30.68. The latter figure is the estimate of daily per person expenditures reported earlier from the Wyoming tourism study.

2 Source: Weighted average of multiples for goods purchased by tourists. See text and Table 3.

Comparisons

Comparisons

Table 3. Total Impacts of Change in Livestock Production and Tourism.

Management Alternatives		Total Change in Sales	Total Change in Employment	Percent Change in Employment
Proposed Action	1990	\$- 763,579	- 9	-.1%
	2005	- 451,320	- 2	-.03%
Intensive Wildlife Management	1990	- 2,098,661	-31	-.5%
	2005	- 2,797,542	-48	-.8%
Multiple Use	1990	+ 13,187	+ 5	+.09%
	2005	+ 1,635,392	+37	+.6%
No Grazing	1990	- 1,242,372	-15	-.2%
	2005	- 2,398,400	-30	-.5%

Source: Calculated from data shown on Tables 1 and 2.

Table 3a. Comparison of Direct Effect on CMR Ranchers.

Management Alternatives		Percent Change in Gross Income and Sales
Proposed Action	1990	-3.2%
	2005	-3.3%
Intensive Wildlife Management	1990	-6.8%
	2005	-6.0%
Multiple Use	1990	-2.3%
	2005	- .7%
No Grazing	1990	-5.3%
	2005	-10.5%

Source: Linear Programming Outputs. See Appendix for detailed Tables.

indirect employment is slightly increased in the tourism dependent sectors. The changes (positive and negative) in regional employment from the recreation components of the plan are relatively insignificant.

Thus, no alternative under consideration has, in the aggregate, any significant impact to either local or regional employment or sales. See Appendix 13 for a detailed discussion of the methodology involved in estimating the indirect or secondary economic effects.

The detailed methodology used for estimating the economic impacts to the ranchers is presented in Appendix 10.

III. AFFECTED ENVIRONMENT

III. AFFECTED ENVIRONMENT

OVERVIEW

The Missouri River has long served as an access route to Montana and the west. Although the river still receives limited use for transportation, it is primarily a recreational waterway. The "breaks," erosional interruptions in the river's escarpment, once supported primitive man and a diversity of animals. Today man is still on the scene, but many wildlife species, including plains grizzlies, bison, Audubon big-horn sheep, and wolves have vanished from the breaks.

CMR embraces 1,094,301 acres of land and water and stretches 125 miles from the Fort Peck Dam west along the reservoir and Missouri River in northeastern Montana (Table 4). Private individuals own about 51,000 acres, and the State of Montana owns about 35,000 acres within the CMR boundary. These inholdings are scattered and vary in size from 40 to almost 5,000 acres.

Table 4. Land and water acreages within the Charles M. Russell National Wildlife Refuge, Montana.

Area	Acres
Fort Peck Reservoir (at maximum operating pool)	249,000
Federal lands	760,000
State lands	35,645
Private lands	49,656
Total land and water acres	1,094,301

The area now known as CMR was originally withdrawn from the public domain by President Franklin D. Roosevelt under Executive Order 7509 in 1936; initially, it was called the Fort Peck Game Range. As outlined in the Executive Order, the primary purpose of the range was:

"...for the conservation and development of natural wildlife resources and for the protection and improvement of public grazing lands and natural forage resources...natural forage resources therein shall be first utilized for the purpose of sustaining in a healthy condition a maximum of four hundred thousand (400,000) sharptail grouse, and one thousand five hundred (1,500) antelope, the primary species and such nonpredatory secondary species in such numbers as may be necessary to maintain a balanced wildlife population...Provided further, that all the forage resources within this range or preserve shall be available, except as herein otherwise provided with respect to wildlife, for domestic livestock..."

In 1963, the Fort Peck Game Range was redesignated the Charles M. Russell National Wildlife Range by Public Land Order 2951, in honor of Montana's great cowboy artist. With renaming of the area, the Secretary of Interior reaffirmed the primary purpose and mission of CMR as a unit of the National Wildlife Refuge System, with primary responsibilities for administration of the area resting with FWS. BLM, however, continued to administer the livestock grazing program, subject to the program and policy requirements of FWS. On 27 February 1976, the administrative status of CMR and all other game ranges in the nation was again changed by the signing of Public Law 94-223. This brought to a close the joint management between BLM and FWS. Public Land Order 5635 (1978) changed the name of the game range to Charles M. Russell National Wildlife Refuge (Table 5).

Table 5. Major documents affecting the Charles M. Russell National Wildlife Refuge, Montana.

Document name	No.	Date	Subject
Executive Order	6491	12/12/33	Ft Peck Dam (COE)
" "	6707	05/09/34	" " " "
" "	6841	11/09/34	" " " "
" "	7331	04/03/36	" " " "
" "	7509	12/11/36	Ft Peck Game Range
" "	9132	04/13/42	Ft Peck Dam (COE)
Secretarial Order	2843	11/17/59	Transfer jurisdiction
Public Land Order	2951	02/25/63	Name change (FWS)
" " "	4588	03/25/69	UL Bend National Wildlife Refuge (FWS)
Public Law	94-223	02/27/76	FWS sole administrator of the Wildlife Range
Public Land Order	5635	04/25/78	Name change to Refuge (FWS)

Although Public Law 94-223 vested management authority of CMR with FWS, BLM still retains management authority over the Upper Missouri National Wild and Scenic River, part of which flows through CMR, as provided by Public Law 94-486.

Conflicting legislation and mandates exist between FWS and COE. A Memorandum of Agreement (Appendix 3) has been signed by both agencies and is guiding current management of the area. About 8,190 acres are occupied by supporting facilities such as powerhouses, dam, townsite, and maintenance areas. Special public use areas have been identified by COE for development of water-based recreation at 16 locations. Three areas are presently leased by MDFW&P as State parks. The Bureau of Reclamation is responsible for power distribution.

Among other agency-management authorities on CMR is MDFW&P. The department, together with FWS, manages resident game and fish. State school lands within CMR, generally located in sections 16 and 36, are administered by MDSL. Status of these lands is similar in many respects to that of private inholdings.

Construction and maintenance facilities for US Highway 191 on the west side of CMR and State Highway 24 near Fort Peck on the east are administered by the Montana State Highway Department. Certain aspects of livestock grazing within CMR, such as the control of disease outbreaks and branding of cattle, are managed by the Montana Livestock Board.

The special mission of the National Wildlife Refuge System of which CMR is a part is to provide, manage, and safeguard a national network of lands and waters sufficient in size, diversity, and location to make available now and in the future public benefits associated with wildlife over which the federal government has responsibility, particularly migratory birds and endangered species (Fish and Wildlife Service 1979).

The broad objectives of the National Wildlife Refuge System are to:

- 1) Preserve, restore, and enhance in their natural ecosystems all species of animals and plants that are endangered or threatened with becoming endangered on lands of the National Wildlife Refuge System.
- 2) Perpetuate the migratory bird resource for the benefit of people.
- 3) Preserve the natural diversity and abundance of mammals and non-migratory birds on refuge lands.
- 4) Provide understanding and appreciation of fish and wildlife ecology and man's role in his environment and to provide visitors at service installations with high quality, safe, wholesome, and enjoyable recreational experiences oriented toward wildlife.

CLIMATE

The climate of the CMR region is typical of the high plains in North America with moderately cold winters (average January minimums near 0°F) having occasional cold periods exceeding -20°F. Summers are generally pleasant (averaging in the 80°'s during afternoon hours) with occasional hot periods exceeding 100°F. Low humidity, high temperatures, and moderate to strong winds cause rapid loss of soil moisture. Mean annual precipitation is 12-13 inches with about 70 percent occurring

from April-September. Due to the dominantly heavy-textured soils, runoff is rapid, often exceeding 50 percent of the total precipitation. The average frost-free period is about 120 days. CMR is also subject to intense lightning storms from late July-early September, often resulting in wildfires.

GEOLOGY

The Missouri and Musselshell rivers flow through deep valleys with narrow flood plains lying 500-1,000 feet below the average elevation of surrounding uplands. Elevations vary from slightly over 2,000 feet above mean sea level (msl) near Fort Peck Dam to over 3,200 feet in the Seven Blackfoot area. Three main landforms, uplands, breaks, and flood plains, dominate CMR and the surrounding area. Uplands are level-to-rolling prairies dissected by intermittent streams flowing toward the Missouri River in a generally eastward direction. These are the sagebrush-grassland plains typical of eastern Montana.

The breaks lying adjacent to the Missouri River are typified by dissected, rough terrain often culminating in spectacular badlands. This topography is common to a strip of land 2-10 miles wide along the Missouri River and varies from low, barren hills of the Big Dry area south of Fort Peck to severely eroded coulees of the Seven Blackfoot and Burnt Lodge areas and the juniper, pine, and grassland ridges on the western half of CMR. Approximately 40-50 percent of lands within CMR consist of steep ridges and eroded coulees.

Flood plains occur along the Missouri and Musselshell rivers at upper extremities of Fort Peck Reservoir and along some of the larger drainages. These developed from pre-glacial river and stream alluvium and are characterized by heavy clay soils, deciduous trees, sagebrush, and grassland. These flood plains are comparatively flat and vary in width from 25 yards-2 miles.

The Judith River formation outcrops west of Rock Creek in Phillips County in major stream valleys. It is composed of several hundred feet of interbedded shale, siltstone, and sandstone with scattered beds of lignite and bentonite. This formation has good stability, but its outcrop area is limited to steep slopes.

Bearpaw shale underlies more of CMR than any other formation. The breaks west of UL Bend are almost entirely composed of this shale as are lower slopes east of UL Bend, except in the central and southern parts of Big Dry Arm. Bearpaw shale is almost entirely composed of dark gray, clayey shale and includes thin beds of bentonite. The predominant particle size of this formation is clay, and the predominant clay mineral found in Bearpaw shale is montmorillonite. As a result, this unit swells when exposed in steep slopes and erodes rapidly at many locations.

Fox Hills sandstone is composed of yellowish gray sandy shale, claystone, siltstone, and/or very fine-grain sandstone and grades upward into relatively thick beds of resistant fine and medium-grain yellowish brown sandstone. The formation is generally found in areas of high

relief along Fort Peck Reservoir such as Larb Hills, Harper Ridge, and much of Garfield County. Along Big Dry Arm, Fox Hills sandstone is found south to Rock Creek (east).

The Hell Creek formation is generally found above 2,500 feet in elevation in the central and eastern parts of CMR. The formation is composed of unconsolidated fine sediments such as claystone, shale, siltstone, and sandstone. Some of the clay and silt-rich zones of the formation tend to shrink and swell during excavation or when exposed to water.

Fort Union formation is found in Garfield and McCone counties, east and west of Big Dry Arm and south of Rock Creek (east). The formation is also found in the highest parts of Larb Hills. Tullock member, most widely found subunit of the Fort Union formation on CMR, is light gray to dark gray shale alternating with sandy shale and gray to buff sandstones. Lignite beds are also found in association with this member. This formation responds similarly to the Hell Creek formation to most development activities.

Glacial till is found at scattered locations, particularly between Rock Creek (west), Phillips County, and Valentine Creek. This is dense, clayey material with characteristics similar to Bearpaw shale. Outwash and related deposits are found west of UL Bend on low benches and in the Missouri valley, in the lee of bedrock ridges. These latter deposits are porous and stable.

The historical rock record exposed on CMR dates to almost 80 million years bp (before present) or Late Cretaceous. Sedimentation dominated the area until about 58 million years bp. For the next 55 million years, sediments were successively eroded away as the plains and surrounding areas were sporadically uplifted. In the past 3 million years, glaciers advanced over the area, the most recent retreating northward about 20,000 years bp. Construction of Fort Peck Dam in 1937 further altered CMR's landscape.

Ice jams cause the highest levels of flooding on major streams such as the Missouri River, Big Dry Creek, and Musselshell River. Snowmelt runoff causes the greatest flood flow volumes on these same streams. High flows can occur on these streams any time from January-August. Rainstorms cause major flooding on smaller drainages.

All stream channels flowing through unconsolidated material meander over time. The Missouri River upstream of Fort Peck Reservoir has shifted as much as 2,000 feet in about 65 years at average rates up to 30 feet/year. The Fort Peck Reservoir delta is the area of greatest channel change and sedimentation; other areas of channel change and bank erosion are found on most upstream portions of most stream bottoms.

Areas of current and past landslide activity cover about one-third of the surface area of CMR. Steeply sloping areas in the western Bearpaw breaks, Garfield County, Larb Hills, and Harper Ridge have the most significant number of landslides. Landslides are of several types; slump-earthflows are the most common. Rapidly moving debris flows also occur, especially in the western Bearpaw breaks.

Piping is an important erosional process in the Hell Creek formation and in landslide deposits. Pipes may collapse or create general ground instability. Areas of classic piping on CMR occur at Hell Creek, Big Dry Arm, and other locations.

Results of a mineral survey of CMR (Geological Survey 1979) indicate that parts of the area have a moderate potential for oil and gas, low to moderate potential for lightweight aggregate, bentonite and coal, and low to nil potential for other mineral commodities such as uranium or gold. Oil accumulations probably lie at depths greater than 4,000 feet. The most likely area of accumulation underlies the western part of CMR.

There is a good possibility that the entire refuge is underlain by shallow natural gas deposits. Significant resources of this type are already being developed in the Bowdoin field and on flanks of the Bearpaw Mountains. The gas deposits, if present, would occur at depths of less than 2,000 feet.

Bentonite resources are estimated at about 4.3 billion tons. Highest quality bentonite beds are found in Bearpaw shale, particularly west of Nichols Coulee in the Siparyann bed. This bed ranges in thickness from 1-6 feet at the outcrop. Bentonite resources east of Nichols Coulee are considered of low potential because of thinness and poor quality. Bentonite on CMR is of unacceptable quality as drilling mud, but acceptable for the casting industry to bind molding sand and possibly by the taconite industry to bind finely ground iron ore into pellets.

Bearpaw shale has a moderate potential for use as lightweight aggregate. Shale sequences high in bentonite content are the most suitable. The refuge contains significant quantities of sand and gravel; one gravel pit is currently in use near Hell Creek.

CMR is estimated to contain over 290 million short tons of coal. Of this total, the Judith River formation may contain about 190 million short tons in beds averaging less than 2.5 feet in thickness and which contain about 40 percent ash. About 100 million short tons of coal are found in Hell Creek and Fort Union formations in beds ranging from 1-5 feet in thickness.

SOILS-WATER RESOURCES

Four major soils orders are represented on the refuge. They are Entisols (soils characterized by very limited development), Aridisols (well-developed soils formed in a dry environment), Mollisols (soils with surface layers (horizons) noticeably darkened by organic matter accumulations), and Vertisols (soils that have a self-plowing action because of high shrink-swell rates associated with varying moisture levels).

Mollisols are prairie soils generally found in areas of higher rainfall than found on the refuge; their extent is very limited here.

Aridisols present on CMR are composed of two types or suborders: those characterized by salt and clay accumulations below the surface, resulting in a relatively impervious subsoil, and those with no significant salt or clay accumulations. These latter types represent the most significant agricultural potential of any soils present because of their fertility and areal extent. They are found on the more gentle slopes of CMR. Garfield and McCone counties most typically contain these soils, which are generally derived from sandstone or alluvium in sedimentary uplands.

Entisols are typically found on the breaks portion of CMR. The vegetated surface is quite unstable on these steeply sloping breaks, and soils are poorly developed. Other Entisols include those present on flood plains of rivers and major creeks in the area. Parent materials (unconsolidated minerals or organic matter from which soils are derived) for these Entisols include alluvial deposits laid down by streams or sedimentary deposits (siltstone, sandstone, or clay from Bearpaw shale).

Vertisols are most commonly associated with the very fine-textured Bearpaw shales and are generally located north of the Missouri River. They are typically found on strongly sloping sedimentary (Bearpaw shale) uplands or as fans or terraces formed below the Bearpaw shale.

In addition to topographic features which affect soils, as described previously, geologic formations such as Bearpaw shales or glacially derived deposits have a definite effect on soils and soil-forming processes. Bearpaw shales and glacial till deposits occur mainly north of the Missouri River on the east side of the Musselshell River and on both sides of the Missouri to the west of the Musselshell River. Soils in Garfield and McCone counties are more commonly derived from sandstone deposits or are formed as alluvial deposits from sedimentary uplands.

Concerning limitations of those soils present, Aridisols and Mollisols are generally amenable to cultivation and respond well to good management practices. Vertisols and Entisols are generally unsuited to agriculture because of their salt content, low productivity, and topographic features which are generally accompanied by high erosion hazards. Several thousand acres of depauperate, heavy clay or salt-affected soils exist on CMR. These soils have low water infiltration rates. Precipitation on such sites remains on the surface until it evaporates. The soil may be completely dry at depths of 6-8 inches below the surface. Range sites associated with such soils are referred to as dense clays or panspots.

Soils or land forms present in Class VIII capability (Appendix 7) are considered suitable only for recreation, wildlife, or watershed uses. Many of these mapping units represent parent materials rather than soils. Decomposing sandstone outcrops, Bearpaw shale, beach sand, and badlands are included in this category.

Soils and weathered bedrock on CMR tend to be moderately to highly expansive. Not only do these soils swell when wetted, but they also heave when excavations are made.

According to Schmidt (1979), erosion rates on the refuge are high. Stock ponds have an average life of about 10 years. The range for sediment accumulation in stock ponds in Bearpaw shale drainages (Willow Creek) is presently from 0.1-5.3 acre-feet/mi²/year. Schmidt stated that yields in other steeply sloping Bearpaw breaks may be as high as 10 acre-feet/mi²/year. The larger figures are as high as those measured anywhere in the semi-arid West. He indicated that the distinction between natural (geologic) erosion and accelerated (man-caused) erosion is not clear. He did state that the occurrence of trenched valley fills extending into headwaters, however, presents the likelihood that erosion rates were much less in previous times, perhaps prior to large scale grazing in the late 1800's.

Schmidt stated that estimates of bare ground percentages correlate more closely with erosion intensity than any other factor identified in the literature. Estimates of 340 samples on the refuge revealed average ranges of from 15-42 percent bare ground for the potentially best range sites.

Since many of the access roads on the refuge are built on gumbolike Bearpaw shale, any measurable precipitation, together with motorized use of these roads, is enough to turn them into impassable quagmires. Ruts created by vehicles during wet weather often do not heal from one year to the next. These ruts then provide channels for water runoff during subsequent rainfall, often leading to complete deterioration of the road and ultimately necessitating complete regrading of the road system.

The most conspicuous water areas on CMR are Fort Peck Reservoir and the Missouri River. The reservoir and river occupy approximately 249,000 acres, over 18 million acre-feet of water, when the reservoir is at peak storage capacity, maximum pool level of 2,250 feet above msl. CMR embraces 35 miles of free-flowing Missouri River upstream of the Fort Peck Dam and only one mile below it. The reservoir extends approximately 90 miles from east to west. Sediment loads in all streams are high as a result of the extremely erosive soils on CMR.

Ground water is relatively deep in the breaks area and domestic wells generally vary from 300-1,200 feet in depth (Table 6). Artesian wells can be developed over much of CMR by drilling to the Judith River formation. Best quality water is found in wells drilled in the alluvium along the Missouri River valley. Good quality water can also be found in the Fox Hills-Hell Creek aquifer in Garfield and McCone counties and on Harper Ridge where springs are numerous.

Table 6. Groundwater sources on Charles M. Russell National Wildlife Refuge, Montana.

Source	Water development potential
Judith River formation	Very good
Bearpaw shale	None
Fox Hills sandstone	Good in upper part where topography not greatly dissected.
Hell Creek formation	Good in lower part where topography not greatly dissected.
Fort Union formation	Poor
Glacial deposits	Poor
Alluvium	Fair-good

Annual runoff for CMR is estimated to range from 0.02-0.04 cubic feet/second (cfs)/mi²/year or 14-29 acre-feet/mi²/year. Average discharge of the Missouri River is 9,288 cfs/year or 0.23 cfs/mi²/year. However, average discharge is experienced only about 13 percent of the time. Flows as low as 0.5 times the mean annual flow occur about 3 percent of the time, and flows as great as 1.5 times the mean annual flow occur about 7 percent of the time (Bureau of Land Management 1979).

Past livestock management practices have resulted in development of small stock ponds and wells within CMR. These stock ponds are normally less than one acre in size and are located near heads of small coulees. As discussed earlier, most ponds fill with silt, and a few dams occasionally fail during heavy runoff.

WILDLIFE HABITAT-RANGE RESOURCES

Wildlife habitat was evaluated for representative species during summer 1978 on five major vegetative types (Appendix 2). The largest type is the sagebrush-greasewood-grassland, which occupies 61.4 percent of the area and includes four subtypes: big sage-grasslands, silver sage-bottomlands-sandy uplands, greasewood-grasslands-bottomlands, and shadscale-barren areas (Figure 2). Big sagebrush and greasewood are the predominant shrubs, with species such as saltbush, silver sage, rubber rabbitbrush, and skunkbrush also present. Important grasses are western wheatgrass, needle and thread, green needlegrass, bluegrama, Junegrass, Sandberg bluegrass, plains muhly, and bluebunch wheatgrass. The condition of big sagebrush and associated shrub and grass species is limiting to all wildlife species sampled in this type (Appendix 2).

The ponderosa pine-juniper type occurs on 35.5 percent of CMR and includes three subtypes: ponderosa pine, Douglas fir, and juniper. Four coniferous tree species are indigenous: ponderosa pine, Douglas fir, limber pine, and Rocky Mountain juniper. Forest communities are found on some of the poorer soils. Trees are apparently prevented from occupying better sites by competition with grasses for low soil moisture (Producers 1979).

Other major types are grassland-deciduous shrub, riparian-deciduous riverbottoms (including ash coulees), and cultivated lands (hayland and dryland).

Trees, shrubs, and grasses are inadequate for various wildlife requirements sampled. Security cover for elk is lacking from Timber Creek to Fort Peck (Campbell 1979). The interaction of gentle topography, roads, and sparse conifer cover creates security cover problems. Mule deer require better interspersed trees, sage, and grasses as well as more suitable shrubs (big sagebrush, skunkbrush, chokecherry, snowberry, rose, serviceberry, and rubber rabbitbrush) and forbs for food. Sharp-tailed grouse need 2-3 inches more residual cover (8-10 total) and better developed shrub communities (buffaloberry, chokecherry, rose, and snowberry) for food and cover. Mountain bluebirds require more nesting cavities. Porcupines need denser ground cover and more denning sites.

The grassland-deciduous shrub community is found in limited areas and comprises only 1.8 percent of the land base. It includes shrub communities of high importance to wildlife, especially sharp-tailed

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VEGETATION TYPES





LEGEND

VEGETATION TYPES

PONDEROSA PINE - JUNIPER

- (A)  Juniper
(B)  Ponderosa Pine - Juniper

SAGE - GREASEWOOD - GRASSLAND

- (A)  Sage - Grasslands
(B)  Greasewood - Grasslands
 Deciduous Shrub - Grasslands
 River Bottoms

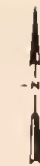
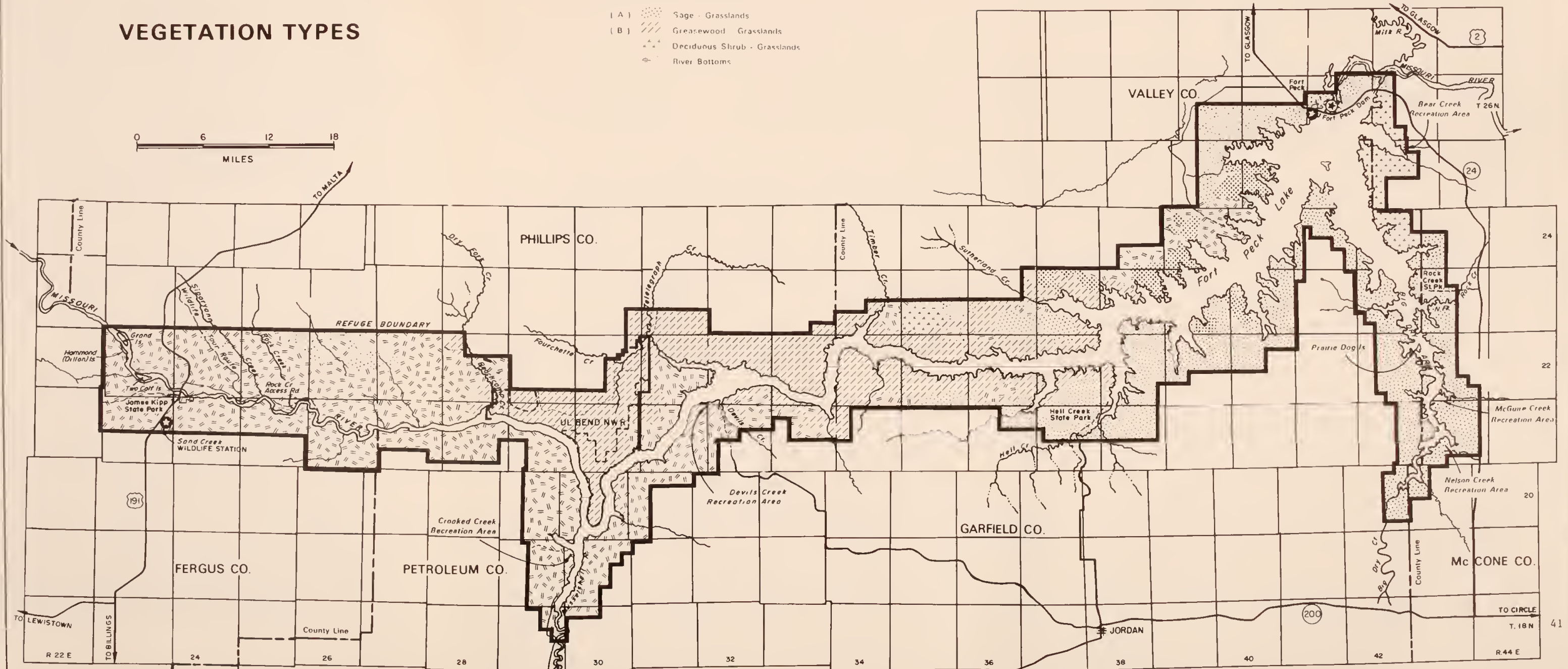


FIG. 2 VEGETATION TYPES



grouse. In those areas where grassland predominates, the key species are perennial grasses such as bluebunch wheatgrass, western wheatgrass, and green needlegrass. Prairie forbs include sagewort, wild licorice, sunflower, dandelion, yellow sweet clover, vetch, phlox, and prairie thermopsis plus many others. Arkansas rose, common snowberry, choke-cherry, western serviceberry, and buffaloberry are important shrub components of this type. Shrub parameters are better in this type than in any other type, but are still inadequate for wildlife (Appendix 2).

The riparian community comprises only 0.7 percent of the area. The major portion of this most productive and important wildlife habitat on CMR was permanently destroyed when Fort Peck Reservoir was filled in the 1940's. Approximately 35 miles of free-flowing river and associated habitat still remain on the western portion, subject to flooding and numerous ice jams. This flooding causes a change in wildlife habitat and associated wildlife-related recreation opportunities.

Woody plants in the riparian community include four species of cottonwood, four species of willow, green ash, box elder, and several shrubs also found in the grassland-deciduous shrub type. There are also several small stands of quaking aspen in this type.

Cultivated lands make up 0.6 percent of the area and occur primarily in the river bottoms in the west half of the refuge and on the uplands in the east half of the refuge. Cultivated lands are a mixture of small grains (barley and wheat), alfalfa, and wild hay. Cultivated lands are considered a major type in this analysis.

Wildlife habitat in riparian and cultivated types rated higher than all other types. Habitat quality for white-tailed deer in these areas rated low because browse was limited on minor continuous streams across the refuge.

A variety of other small habitats is represented within and adjacent to the major vegetative areas. Some of these are canyons, bluffs or rock outcrops, and ponds, all of which sustain or contribute to a variety of plant and animal communities. Pond development is not extensive, and the ponds present are in poor condition for wildlife due to lack of emergent vegetation and inferior upland vegetation.

A range survey was conducted on the refuge in 1978 (Fish and Wildlife Service 1979) in accordance with the Soil Conservation Service (SCS) National Range Handbook. Range sites were identified on the basis of soil mapping units, precipitation, and geology (Appendix 8). Most common sites included overflow, sandy, silty, clayey, thin hilly, shallow clay, panspots, dense clay, thin breaks, saline upland, shale, and badlands. The less common sites included saline lowlands, sands, shallow-to-gravel, shallow, and very shallow. The methodology used in the survey is described in Appendix 8.

After a range site was identified, the plant species present were compared with the range site guide criteria for the site at climax to obtain range condition. Range condition is the amount of deviation from the natural potential or climax. Range condition categories are poor (0-25 percent of climax), fair (26-50 percent of climax), good (51-75 percent of climax), and excellent (76-100 percent of climax).

Overall results of range conditions found on grazing allotments subjected to livestock grazing are excellent, 18 percent; good, 74 percent; fair, 7 percent; and poor, 1 percent (Appendix 9).

The survey revealed that range conditions for unallotted portions of CMR (no livestock) are predominantly excellent, and areas inaccessible to livestock by reason of topography or remoteness from water are excellent. Areas in fair or good condition are considerably more accessible to livestock. Poor range conditions are typically associated with prairie dog towns; locations of prairie dog towns have high correlations with past disturbances such as corrals, stock ponds, overgrazed areas, or former homesteads and are probably indicators of past use rather than causes of current conditions (C. Knowles personal communication).

On CMR, 10 permittees graze 48 percent of the total active federal AUMs, and 48 permittees graze 400 AUMs or less (Appendix 10). Fifteen of the 87 operators are dependent on refuge lands for more than 30 percent of their annual AUM requirements, and 10 operators fulfill 20-30 percent of their annual needs from refuge lands. The remaining 62 operators derive less than 20 percent of their annual forage requirements from CMR.

One of the problems identified during the planning process has been the season of livestock grazing use allowed on the refuge. In the past, grazing seasons have been established more to reflect the needs of operators than to protect natural resources. Currently, 6 allotments use rest-rotation systems, 3 use deferred rotation systems, 15 have authorized use which encompasses year-long grazing on a portion or all of the allotment, and 43 allotments have seasonal grazing (generally spring through fall). Livestock allotment boundaries are generally fenced on east and west boundaries or have physical barriers which preclude livestock movements between allotments. Allotment boundaries generally extend north or south off the refuge. The typical situation is that adjoining lands off the refuge are included in common allotments with CMR lands with no boundary fence separating them.

WILDLIFE

At least 45 mammalian species inhabit CMR, ranging from shrews to Rocky Mountain elk and bison. However, the only bison maintained are in exhibition pastures at Lewistown and Fort Peck; a few stray onto the refuge from private ranches in Fergus and Garfield counties.

Mule deer exceed all other ungulate wildlife in number and distribution (Figure 3). In this area they are nonmigratory, using the same range the entire year although some local movement occurs with seasonal changes in food and range use habits. In the early 1970's, mule deer populations dropped dramatically from 10-11 deer to 2-3 deer/mi² (Mackie 1976) and then stabilized; they now appear to be increasing to 5-6 deer/mi² (Montana Department of Fish, Wildlife, and Parks 1979).

Deciduous river bottoms of the Missouri and Musselshell rivers which have not been inundated by Fort Peck Reservoir are inhabited by white-tailed deer (Figure 3). Small numbers of white-tailed deer also

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MULE DEER
AND
WHITE-TAILED DEER HABITAT

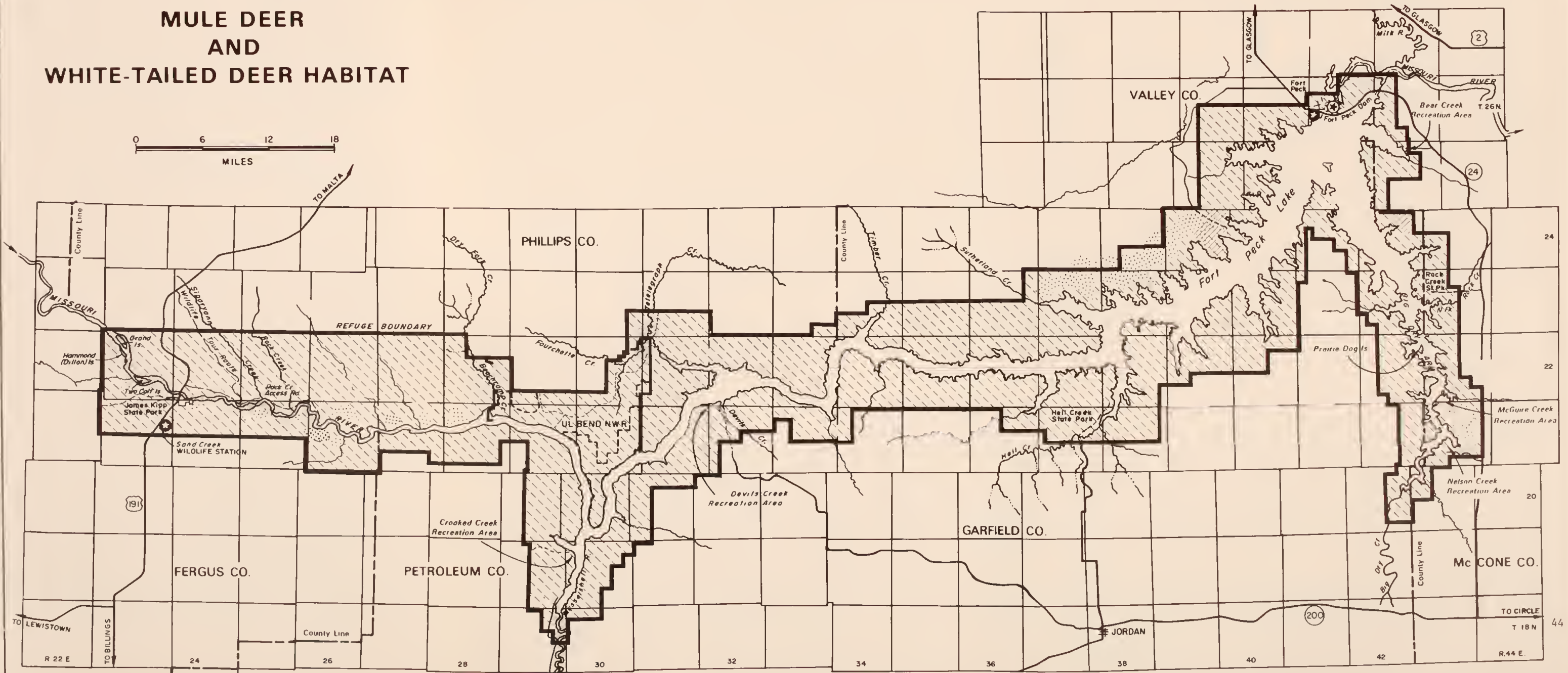
LEGEND

- MULE DEER HABITAT WHITE TAILED DEER HABITAT
- Overall Distribution Overall Distribution
- Primary Known Areas Used During Severe Winters
- Secondary Known Areas Used During Severe Winters



FIG. 3
MULE DEER AND WHITE-TAILED
DEER HABITAT

0 6 12 18
MILES



occur along the reservoir near the Pines Recreation Area and the Fourchette-Telegraph Creek area.

The last native elk vanished from the breaks around the turn of the century. Eighty-one elk were successfully reintroduced in 1951 at three locations in Valley and Fergus counties. Another 49 elk were released at two locations in Phillips County a year later. Most are now found on the north side of the refuge in the breaks (Figure 4); however, some expansion of their range to areas south of the Missouri River in Fergus, Petroleum, and a portion of Garfield counties has occurred. Further expansion in these areas may add an additional 700-900 animals to the herd. Adjacent landowners' and grazing permittees' attitudes are negative toward this expansion, and poaching and illegal shooting could limit further extension of their range. Crop depredations from elk occur on private land both within and adjacent to CMR in the northeast. The present elk population level in the breaks ecosystem (on and off the refuge) is approximately 1,300-1,500. CMR comprises only a portion of the herd's habitat. Elk do not recognize the refuge boundary and freely use habitat on either side.

Pronghorns occur sparingly within CMR since there is little suitable year-round habitat. However, during severe winter storms, pronghorns and mule deer move into the breaks for food and shelter. Concentration areas for the severe winters of 1977-78 are shown on Figure 5.

Sixteen Rocky Mountain bighorn sheep were released in 1947 along Billy Creek within a 328-acre fenced enclosure on range formerly occupied by Audubon bighorn sheep. In 1951, the herd had grown to 54. In 1952, the fence was removed, the animals dispersed, and by 1963, the entire population had disappeared, apparently because of poaching, predation, disease, and competition with livestock. A second attempt to reestablish bighorns in the breaks was undertaken between 1958-61. Forty-three sheep were stocked in a 2,200-acre enclosure near the west boundary of CMR (Figure 6). The population climbed to 80-100 animals by 1969. Then a series of circumstances, including severe winters and competition with livestock, decimated the population until only 10-15 animals remained. Twenty-seven Rocky Mountain bighorn sheep were released in the Mickey-Brandon Buttes area on March 8, 1980. An aerial count in this area during November 1983 revealed 57 sheep.

Black-tailed prairie dogs have been eliminated over much of their original range in the western United States. However, 112 widely scattered dog towns (Figure 7) occupying approximately 5,240 acres are present on CMR. These towns provide all or partial habitat requirements for some 30 other species of wildlife.

The rugged breaks, benchlands, and flood plains combine to support a large variety of other mammals including bobcats, badgers, coyotes, striped skunks, white-tailed jackrabbits, mountain and desert cottontails, raccoons, porcupines, and numerous small rodent species. Beaver, mink, and muskrats occur along the river bottoms and, to a lesser degree, along the reservoir shoreline.

The diverse, avian habitat on the refuge attracts a large variety of birds. Over 245 species have been recorded, of which 15 percent are year-round residents. Upland sandpipers, mountain plovers, long-billed

curlews, and burrowing owls are among the more unique birds which inhabit the grassy benchlands; burrowing owls and mountain plovers are also commonly associated with prairie dog towns.

Cottonwood trees partly inundated by the reservoir support nests of several pairs of osprey as well as rookeries of double-crested cormorants and great blue herons. Prairie falcons and golden eagles are common nesting residents on cliffs of the more rugged and inaccessible portions of the breaks. Two of the prairie falcon nest sites appear to be suitable for cross-fostering of peregrine falcons.

Very little waterfowl production occurs on Fort Peck Reservoir; however, geese concentrate in the safety of several of the bays during their molting period, and small flocks of ducks over-winter below the dam most years. The largest numbers and varieties of waterfowl occur during fall migration when the birds utilize standing grain crops and marsh developments along the flood plain for feeding and staging. Limited waterfowl production occurs on upland ponds.

The most common upland game birds are sharp-tailed grouse. They occur across CMR in the ecotone between forest and prairie, with woody vegetation in the form of shrubs and trees considered an essential component of their habitat (Grange 1948). Population estimates for sharp-tailed grouse are speculative; one estimate of spring breeding bird densities is 5-10 birds/mi² (R. Watts personal communication). Known dancing grounds are shown on Figure 4.

Late summer concentrations of nearly 500,000 mourning doves have been observed near the Musselshell River bottoms and exposed weedy flats along the reservoir on the west side of CMR. Other upland game birds, including sage grouse, gray partridge, ring-necked pheasants, and Merriam's turkeys, occur in varying numbers and locations.

Several species of nongame birds occur seasonally on CMR. Birds considered common and very numerous at one or more seasons include red-tailed hawks, marsh hawks, common nighthawks, poorwills, eastern kingbirds, prairie horned larks, bank swallows, black-billed magpies, pinyon jays, American robins, mountain bluebirds, Bohemian waxwings, house sparrows, western meadowlarks, yellow-headed blackbirds, red-winged blackbirds, Brewer's blackbirds, lark buntings, American goldfinches, and chipping sparrows.

The CMR fishery resource is limited to Fort Peck Reservoir, the Dredge Cuts, the Missouri River above the reservoir and below the dam, Musselshell River, and stocked ponds (Alvord 1979). Common sport fish include northern pike, walleye, lake trout, shovelnose sturgeon, sauger, burbot, paddlefish, and channel catfish. Pallid sturgeon are present in small numbers and have been called a threatened species by the American Fisheries Society (Alvord 1979). They have not been so classified by the Secretary of the Interior. A commercial fishery exists on the reservoir involving goldeye, carp, river carpsucker, buffalo, and freshwater drum.

Fisheries management is confined primarily to stocking operations from state and federal hatcheries and enforcement of regulations. In addition, ongoing studies and research by MDFW&P are defining requirements for paddlefish spawning; significant walleye spawning runs up Big Dry Creek have been documented (R. Johnson personal communication). The CMR fishery is limited by siltation of the lake and fluctuating water

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LEGEND

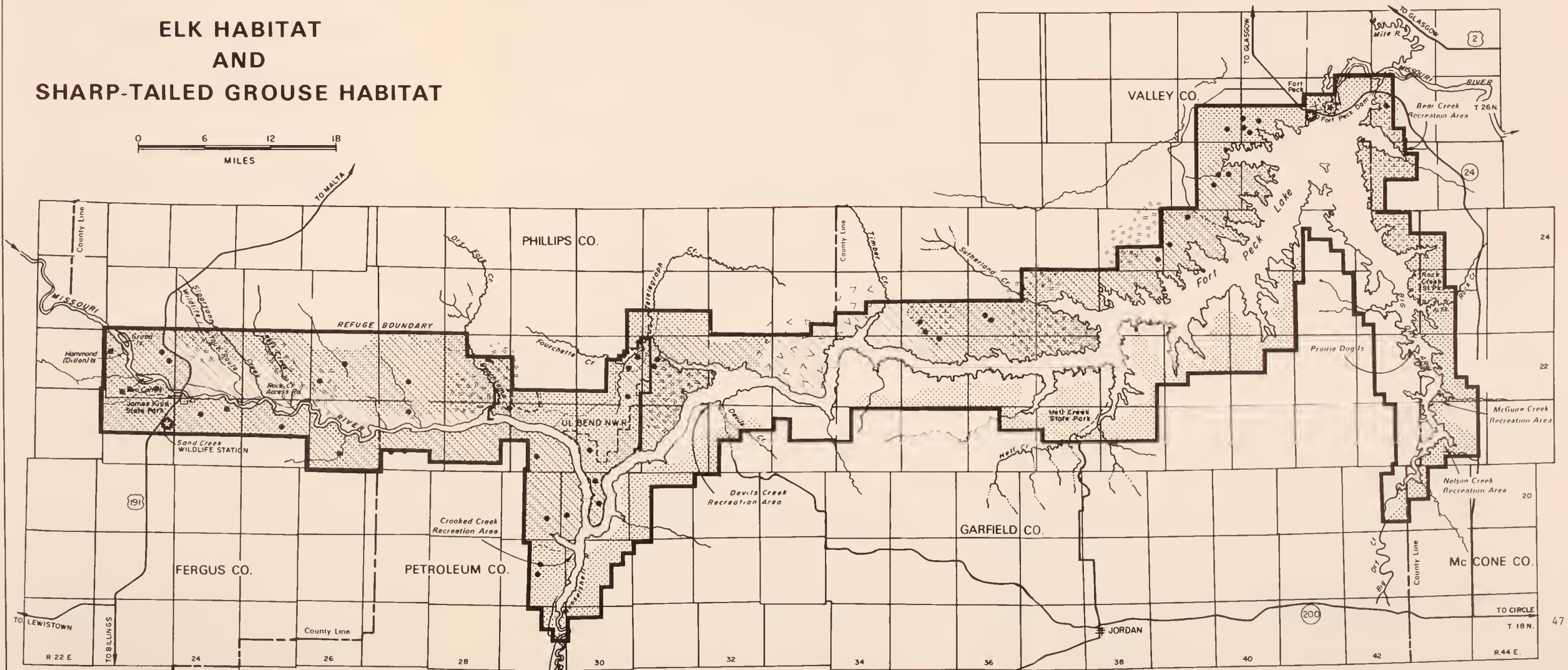
- ELK HABITAT
- Overall Distribution
 - Occasional Winter Distribution
 - Normal Winter Distribution

- SHARP-TAILED GROUSE HABITAT
- Overall Distribution
 - Dancing Grounds
 - Excellent Deciduous Shrub Habitat



FIG. 4 ELK HABITAT AND
SHARP-TAILED GROUSE HABITAT

ELK HABITAT
AND
SHARP-TAILED GROUSE HABITAT



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PRONGHORN HABITAT
AND
SAGE GROUSE HABITAT

LEGEND

- PRONGHORN HABITAT**
- Overall Distribution
 - Winter Distribution
 - Silver Sage Bottoms Used Only During Severe Winters, Outside Normal Overall Distribution
- SAGE GROUSE HABITAT**
- Overall Distribution
 - Winter Distribution
 - Silver Sage Bottoms Used Only During Severe Winters, Outside Normal Overall Distribution
 - Strutting Grounds

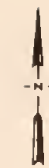
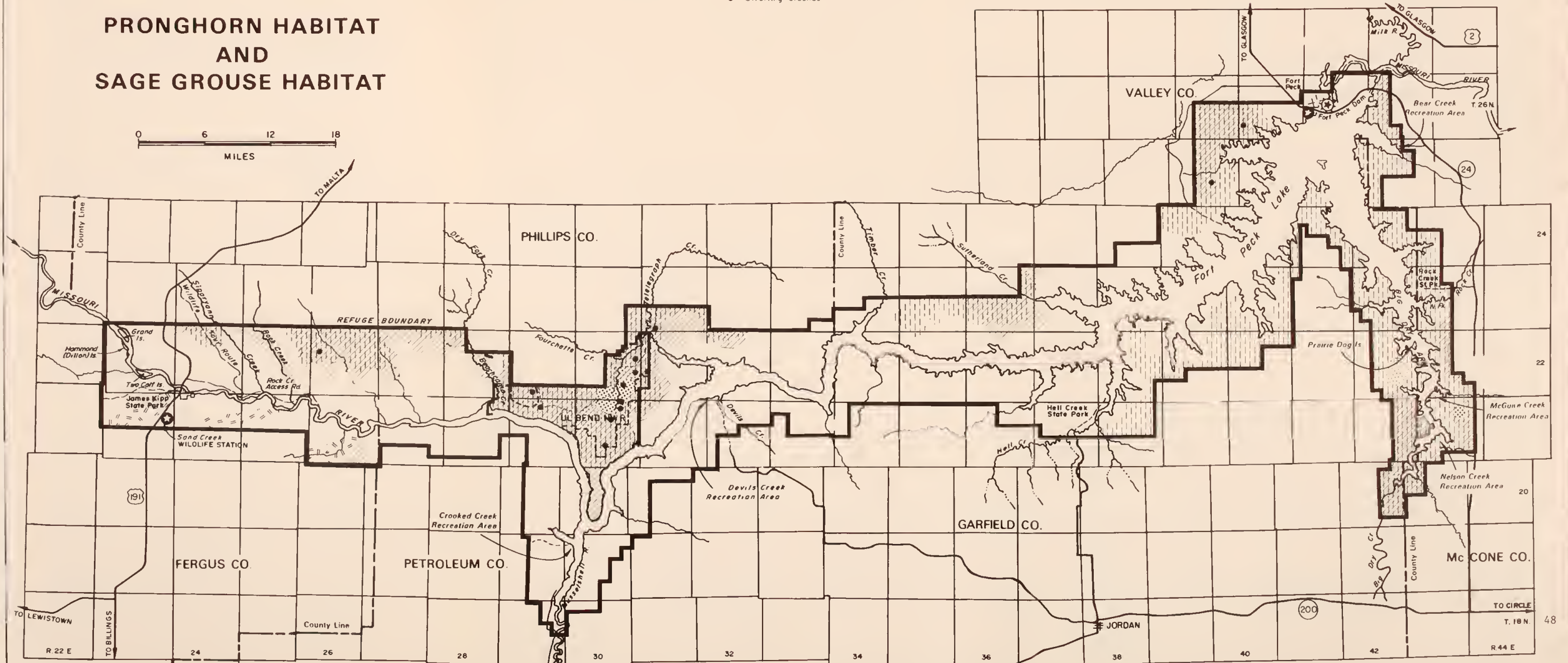


FIG. 5
PRONGHORN HABITAT AND
SAGE GROUSE HABITAT

0 6 12 18
MILES



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ENVIRONMENTAL STATEMENT

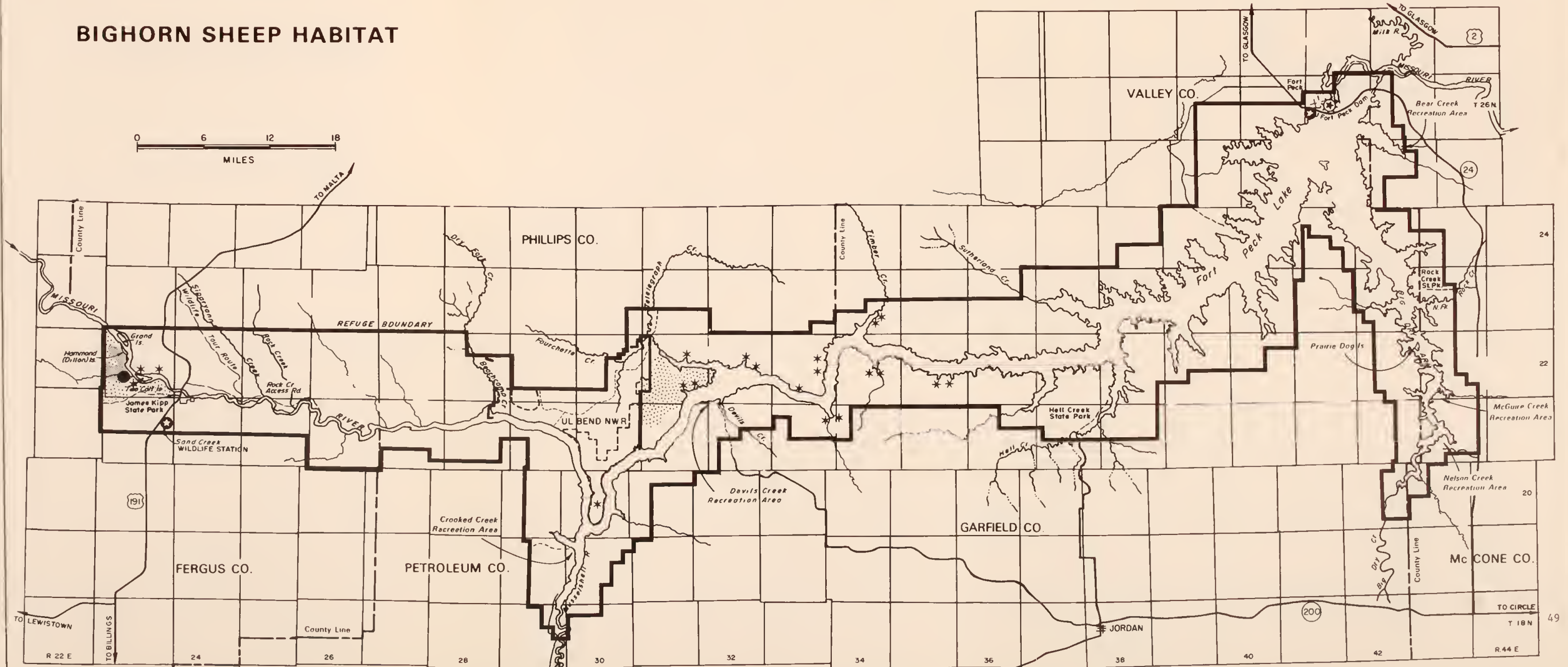
LEGEND

- BIGHORN SHEEP HABITAT
- Overall Distribution
 - Winter Distribution
 - Critical Winter Distribution
 - Possible Introduction Sites



FIG. 6 BIGHORN SHEEP HABITAT

BIGHORN SHEEP HABITAT



LEGEND

* Prairie Dog Town

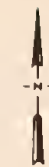
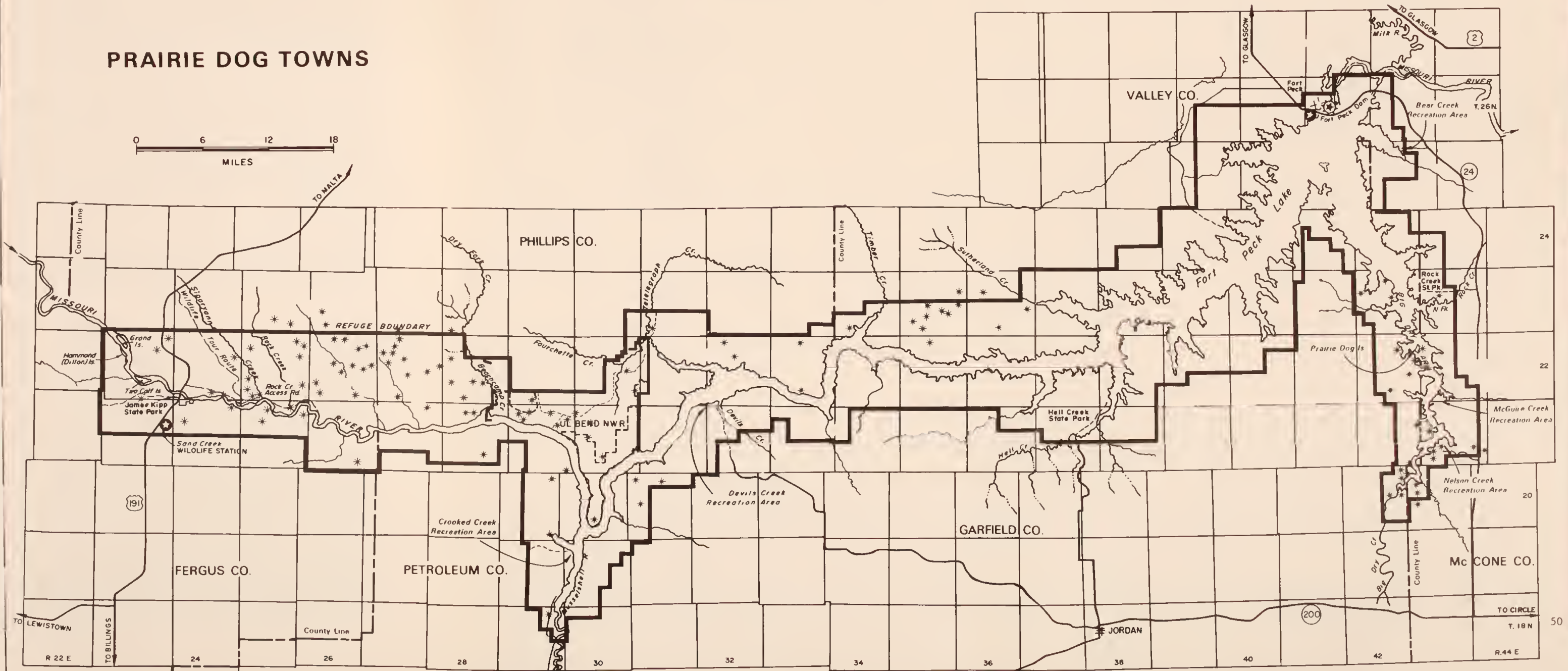


FIG. 7 PRAIRIE DOG TOWNS

PRAIRIE DOG TOWNS



levels which makes establishment of littoral zone vegetation needed for spawning habitat almost impossible. This problem is compounded by Fort Peck being the first mainstream reservoir on the Missouri which makes it difficult to control water levels. Due to these limitations, there is little that can be done to improve the current fishery management program. Small intermittent and continuous streams may provide spawning and nursery habitat. However, no information is available on these streams.

Six species of amphibians and ten reptiles are known to occur in eastern Montana with ranges overlapping CMR. None of these species is endangered or threatened and none has commercial value.

Peregrine falcons often winter in the vicinity of Fort Peck where they prey on winter flocks of ducks and other birds. Occasional sightings have also been made at the west edge of CMR. Migrating bald eagles rest along the shoreline of Fort Peck Reservoir as well as along the Missouri River. One nest is thought to have been built in 1966 along Two Calf Creek where it joins the Missouri River (C. Jones personal communication). In 1967, a black-footed ferret survey reported ferret sign on two prairie dog towns although no ferrets were observed (Fortenbery 1967).

No endangered or threatened species of plants are known to occur on CMR (K. Lackshewitz personal communication). However, the refuge may be within the geographical distribution of Rorippa calycina, a species of watercress classified as potentially threatened or endangered in Montana.

RECREATION AND CULTURAL RESOURCES

Within a 150-mile radius of CMR, there are numerous competing recreation resources which constitute a significant array of sites and areas available to the public (Table 7). Because they are so extensive in size and located in a lightly populated section of the country, they generally receive only limited use. In addition, there are many hiking and jeep trails, ghost towns, state parks, wildlife areas, and other recreation opportunities available to the public that tend to compete with similar opportunities available on the refuge.

Major recreation attractions on CMR include the 249,000-acre Fort Peck Reservoir and the scenic segment of the Upper Missouri National Wild and Scenic River administered by BLM. A designated national wilderness area is located at UL Bend, and fifteen additional wilderness areas comprising about 161,000 acres have been proposed for inclusion in the National Wilderness Preservation System and are awaiting Congressional action.

Considering its vast size, CMR contains relatively few developed recreation areas. Most of these are COE areas located in the vicinity of Fort Peck Townsite and the Big Dry Arm of the reservoir. Three state parks are administered by MDFW&P. FWS manages the bulk of undeveloped lands on CMR. The only developed recreation areas administered by this agency are a wildlife tour route, boat access sites, and a wildlife display pasture at Lewistown.

Table 7. Competing recreation resources on and within 150 miles of the Charles M. Russell National Wildlife Refuge, Montana.

Area name	Distance from CMR (miles)	State/county/province
		Montana
Ackley Lake	70	Judith Basin
Beartooth Game Range	130	Lewis and Clark
Benton Lake National Wildlife Refuge	90	Cascade
Bighorn Canyon National Recreation Area	150	Bighorn
Bowdoin National Wildlife Refuge	50	Phillips
Canyon Ferry Reservoir	150	Broadwater, Lewis & Clark
Custer National Forest	110	Various counties
Deadman's Basin Reservoir	100	Golden Valley
Freezeout Lake Game Management Area	150	Teton
Fresno Reservoir	70	Hill
Gallatin National Forest	110	Various counties
Gates of the Mountains Wilderness Area	150	Clark, Meagher
Helena National Forest	110	Various counties
Holter and Hauser lakes	150	Lewis and Clark
Lake Francis Recreation Area	130	Pondera
Lake Mason, Halfbreed and Hailstone	70-110	Various counties
National Wildlife refuges (satellites of CMR)		
Lewis and Clark National Forest	70	" "
Lewis and Clark National Historic Trail	-	" "
Martinsdale Reservoir	90	Meagher, Wheatland
Medicine Lake National Wildlife Refuge	90	Sheridan, Custer
Medicine Rocks State Park	100	Carter
Missouri River above Fort Benton	80	Various counties
Nelson Reservoir Recreation Area	60	Phillips
Smith River	110	Meagher, Cascade
Tiber Reservoir Recreation Area	100	Toole, Liberty
Tongue River	70	Rosebud, Bighorn
Upper Missouri National Wild and Scenic River	0-140	Various counties
Upper Musselshell River	150	" "
Yellowstone River	80	" "
		North Dakota
Headwaters of Lake Sakajawea	130	Williams, McKenzie
Lewis and Clark National Historic Trail	110	Williams, McKenzie
Theodore Roosevelt National Memorial Park	140	McKenzie, Billings
		Saskatchewan (Canada)
Cypress Hills Provincial Park	140	
Prairie Grasslands National Park (proposed)	80	

Source: Montana Department of Fish and Game 1978, North Dakota State Outdoor Recreation Agency 1975, Saskatchewan Tourism and Renewable Resources 1977.

Private cabins are located at four areas on federal land. At present there are 428 lots, 337 of which currently have structures on them. These sites are leased by COE to private individuals. Figure 8 shows existing recreation facilities.

An estimated 357,000 visitor days of use occurred on CMR in 1978. Based on information provided by BLM, the scenic river segment of the Upper Missouri National Wild and Scenic River within the refuge provided about 2,500 floater days of this use (W. Cutler personal communication). Based on a preliminary survey conducted on the refuge in 1978, 91 percent of visitors were Montanans (Fish and Wildlife Service 1978). Approximately 75 percent of the visitation to CMR originated within a 150-mile radius; 20 percent of the visitors came from places between 150-500 miles distant; and the remaining 5 percent originated from points beyond.

CMR is open to camping for two continuous weeks at any one location within any 30-day period. Fishing and hunting, together with other wildlife-related activities, are permitted on the refuge. Hunting is permitted, except in certain areas, for elk, mule and white-tailed deer, pronghorns, waterfowl, sage grouse, sharp-tailed grouse, gray partridge, ring-necked pheasants, and turkeys under state and federal regulations. In 1979, free elk permits for archery hunting were required for the first time. The harvest of game animals in 1979 included 150 elk by gun and 70 by archery, 400 deer by gun and 30 by archery, 7 turkeys and 55 pronghorns (Fish and Wildlife Service 1979). Waterfowl and upland game hunting was considered light. Trapping is currently allowed only as needed to protect resource values. However, a limited trapping program is being considered starting with the 1984-85 trapping season.

Among the most popular activities on the refuge in 1978 were viewing scenery and exhibits, followed by picnicking, fishing, power boating, and camping (Table 8). The methodology used in estimating visitor use is explained in Appendix 17.

Recreation use is concentrated at a few locations on the refuge due to a lack of good roads and access to recreation areas which prevent people from fully utilizing the resources. The boating potential on Fort Peck Reservoir has not been realized (Montana Department of Fish and Game 1978).

Because livestock occur near public use areas, there are isolated instances of minor conflicts with recreationists, such as the presence of animals and their feces in camp-picnic areas, temporary blocking of roads by small herds of cattle, and spooking of game during the hunting season. Visitors passing through the refuge usually see more livestock than wild animals.

There generally have been increases in participation for all recreation activities in those portions of Montana, North Dakota, Saskatchewan, and Alberta within a 150-mile radius of the refuge. In other areas, some of these activities show decreases, such as horseback riding on trails, hunting for white-tailed deer and pronghorns, and ice fishing.

Table 8. Estimates of current visitation on Charles M. Russell National Wildlife Refuge, Montana.

Visitation type	Visitor days (000's)		
	FWS 1978	BLM/COE/State 1978	1978 Totals
Wildlife related			
Cultural studies	*	-	*
Environmental education	*	-	*
Interpretation			
Viewing scenery-exhibits	12	92	104
Recreation			
Hunting	10	2	12
Fishing	5	46	51
Nature observation	3	-	3
Wildlife photography	2	-	2
Backcountry travel (motor)	1	-	1
Backcountry travel (nonmotor)	*	-	*
Nonwildlife related			
Recreation			
Camping	13	19	32
Picnicking	2	75	77
Beach swimming	3	12	15
Powerboating	6	32	38
Nonpowerboating	1	5	6
Waterskiing	1	10	11
Backpacking-hiking	*	-	*
Visiting special sites	1	-	1
Horseback riding	*	-	*
Other	2	-	2
Totals	64	293	357

*Less than 1,000 visitor days.

Recreation needs generally rank lowest in that area immediately surrounding the refuge on the north and east. This is explained by the lack of major urban centers there, compared to those areas in the south and west where the larger cities of Billings and Great Falls are located. In the latter areas, activities for which needs are most critical include nonurban swimming, horseback riding, and backpacking. In the small part of North Dakota lying within the 150-mile radius of the refuge to the east, needs have been identified for such activities as picnicking, beach swimming, and boating (Montana Department of Fish and Game 1978, North Dakota State Outdoor Recreation Agency 1975, Saskatchewan Tourism, and Renewable Resources 1977). No information was available on recreation needs for Alberta and Saskatchewan.

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LEGEND

- ★ FWS Headquarters
- ★ Corps of Engineers Headquarters
- Corps of Engineers Recreation Area
- ◇ Montana Department of Fish, Wildlife and Parks Recreation Area
- Research Natural Area
- ▨ Upper Missouri National Wild and Scenic River
- UL Bend Wilderness (Existing)
- ▨ Proposed Wilderness Areas
- Boating Access (FWS)
- Fishing Access (FWS)
- National Historic Site

Note Fort Peck Recreation Areas Include

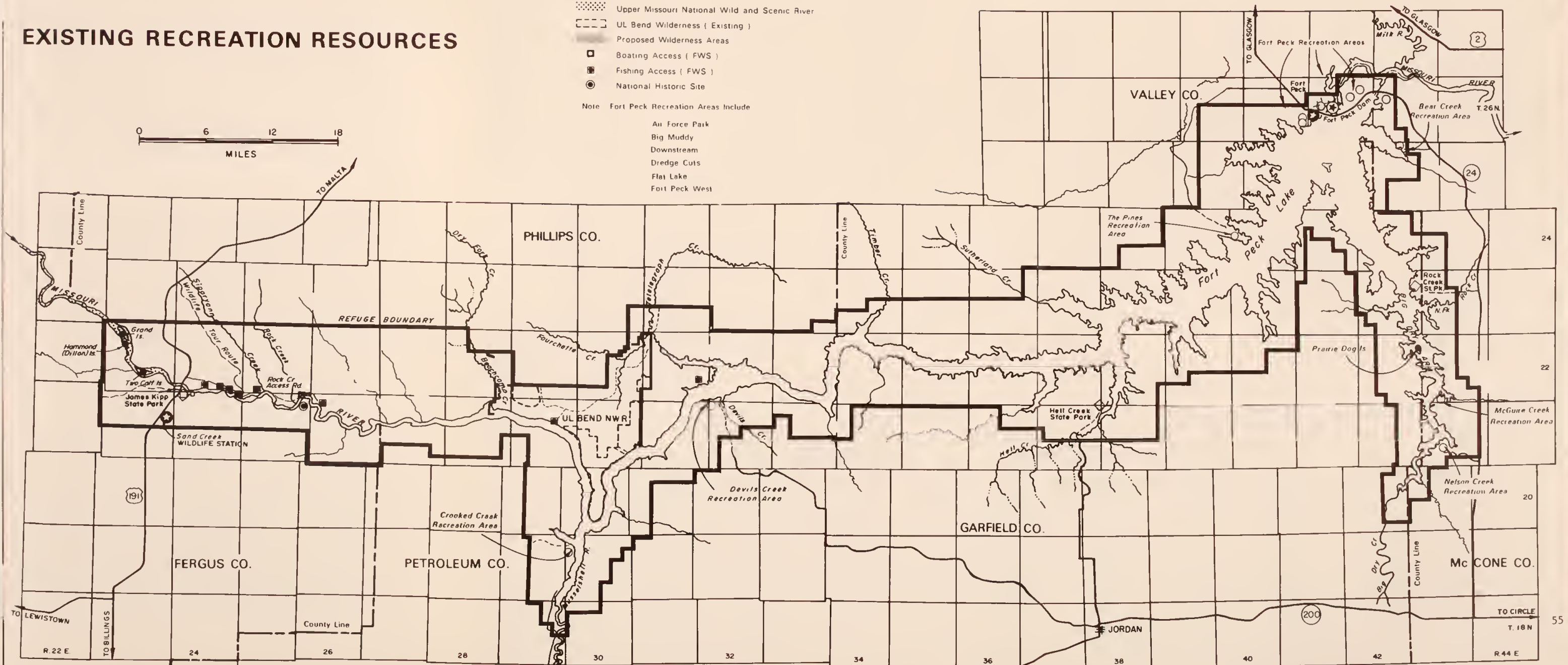
All Force Park
Big Muddy
Downstream
Dredge Cuts
Flat Lake
Fort Peck West



FIG. 8 EXISTING RECREATION
RESOURCES

EXISTING RECREATION RESOURCES

0 6 12 18
MILES



Proposed energy development in Eastern Montana could greatly increase the demand for recreation, while increasing gasoline prices could decrease recreation use on the refuge. No information is available on either of these items.

Many cultural sites appear to be significant in the history or prehistory of the refuge. Sites that have been identified include camp-sites, tipi rings, stone effigies, bison fill sites, homesteads, historic graves, and early townsites. A total of 153 sites, 87 historic and 66 archeological, have been identified, many of which have not been formally recorded. Of these, three historic sites have been found eligible for or placed on the National Register: Rocky Point Townsite, and Lewis and Clark campsites of 23 and 24 May, 1805.

In addition, there are two existing national natural landmarks (Hell Creek and Big Creek) and four research natural areas.

SOCIOECONOMICS

The region around CMR which includes the counties of Fergus, Garfield, McCone, Petroleum, Phillips, and Valley, has been characterized by relatively slow economic growth with an economy based on the production of grain and livestock. Following a regional trend, the number of agricultural operations has decreased while their size and value has increased. Most agricultural products are marketed outside the area.

Farming is the largest single income producing sector of the six-county regional economy (Appendix 11). Gross income from this sector in 1975 amounted to \$70.9 million and represented about 42 percent of the total income. Government led the nonfarm industries as a source of income followed by wholesale and retail trade, services, and contract construction. Range livestock-related earnings for the region averaged \$50.8 million annually between 1970-75, based on a supply of about 599,200 animals (sheep and cattle). A total of about 6,050,860 AUMs is required to sustain this livestock base (Bureau of Land Management 1979).

Total regional income from all sources was \$166,922,000 in 1975, compared to \$101,694,000 in 1970 (Table 9). Data indicate that five of the six counties, (Petroleum County excepted), had per capita income greater than the Montana average in 1974 (Table 10). Also, growth in per capita income for 1969-74 in the region was significant relative to per capita income growth in the United States as a whole.

Between 1960-70, employment decreased in the region (Appendix 12). However, since 1972, all counties have experienced increases in the number of persons employed over 1970. The unemployment rate increased an average of 4.6 percent from 1972-77, considerably below the statewide unemployment rate of 5.8 percent for December 1977.

Based on a preliminary survey of visitor use, costs of goods and services purchased by visitors to CMR totaled about \$32/person (Fish and Wildlife Service 1978). Assuming these costs are representative for the 357,000 visitors who came to CMR, about \$11.4 million was injected into the economy for food, lodging, gasoline, and related items.

Table 9. Farm income data for a six-county region at Charles M. Russell National Wildlife Refuge, Montana.

County	Total farm income (\$000's)		Total non-farm income (\$000's)		Total income (\$000's)	
	1970	1975	1970	1975	1970	1975
Fergus	\$ 9,638	\$16,722	\$21,092	\$32,703	\$ 30,730	\$ 49,425
Garfield	4,277	7,093	1,657	2,658	5,934	9,751
McCone	4,319	11,196	3,632	7,222	7,951	18,418
Petroleum	1,650	178	658	882	2308	1060
Phillips	10,376	13,478	6331	10,955	16,707	24,433
Valley	12,699	22,267	25,365	41,568	38,064	63,835
Six-county total	\$42,959	\$70,934	\$58,735	\$95,988	\$101,694	\$166,922

Source: Montana Department of Community Affairs 1978.

Table 10. Comparative 1974 per capita income for a six-county region at Charles M. Russell National Wildlife Refuge, Montana.

County-state	Per capita income	Average annual increase 1969-74 (%)
Fergus	\$4,722	11.4
Garfield	4,449	11.9
McCone	6,801	16.2
Petroleum	3,751	9.4
Phillips	4,413	12.2
Valley	4,681	12.6
Montana	4,347	9.6
United States	\$4,572	7.6

Source: Bureau of the Census 1977.

Table 10a. Charles M. Russell National Wildlife Refuge Study, Region¹ and the Montana Economy (Fergus, Garfield, McCone, Petroleum, Phillips, and Valley counties, Montana)

Date	Employment ¹	Income ¹	Average Income ¹
1970	4,150	\$17,780,000	\$4,284
1975	5,503	\$37,288,000	\$6,776
1977	5,552	\$42,794,000	\$7,708
<u>State of Montana</u>			
1977	175,652	\$1,702,903,000	\$9,695

¹ Source: County Business Patterns - Montana, Table 2, Counties - Employees, Payroll, and Establishments, by Industry: 1977

The installed electrical generation capacity of Fort Peck Dam and powerplant totals 165,000 KW. The reservoir now produces over \$13 million in average annual benefits derived from power production, flood control, navigation, irrigation, rentals from leasing of land, and recreation at COE areas (Corps of Engineers 1977).

Under provisions of the Refuge Revenue Sharing Act of 1978 (Public Law 95-469), as amended, payments are made to local governments. A total of \$15,133.54 was distributed to the six counties in the CMR region in fiscal year 1978 under terms of this Act (Fish and Wildlife Service 1978).

In 1979, 67 grazing allotments (Figure 9) were partially or totally located on CMR; 87 individuals, companies, or associations grazed livestock on the refuge. CMR records for that year indicate 60,108 federal livestock AUMs were authorized on the refuge, with 3,584 federal AUMs in a nonuse status, and 56,524 federal AUMs representing actual use. Private and state AUMs totalled 12,135 within the refuge boundary.

Federal grazing fees were \$1.89/AUM in 1979. The 56,524 AUMs of grazing on federal range represented \$106,830 in revenues paid to the United States Treasury.

MDSL has a sliding scale for determining the amount paid per AUM on state land. This is based upon the carrying capacity of a given parcel for the grazing season. The rates for less than 14 head/section are \$3.54/AUM, for 14-19 head, \$3.64/AUM, and over 19 head, \$3.74/AUM. Most of the state lands on CMR fall in the "under 14 head" category (G. Brandenburg personal communication). AUMs in Montana on private rental lands were a minimum of \$8.40/AUM in 1979 (Economic, Statistics and Cooperative Service 1979).

In 1979, approximately 800 acres of CMR were farmed. This consisted of about 70 acres of grain, 450 acres of hay, and 280 acres of dense nesting cover. FWS's share was 20 acres of grain crops, 20 acres of hay, and 280 acres of dense nesting cover. No data are available on income derived by the eight cooperators from the crops they produced.

The CMR area is rural and sparsely populated. CMR occupies portions of six counties which had a 1970 population of about 34,000 (Table 11) and a 1975 estimated population of approximately 36,500. Three towns adjacent to CMR and their 1970 populations are Glasgow, 20 miles north (population 4,700); Lewistown, 65 miles southwest (population 6,437); and Malta, 69 miles north (population 2,195). Several other smaller towns and villages border the area.

As with most rural areas in the United States, there was a general population decline in the six Montana counties contiguous to CMR from 1960-70. In the period 1960-70, while the population in Montana as a whole was increasing by nearly 3 percent, these counties decreased by nearly 28 percent. However, from 1970-75, this trend was at least temporarily reversed because population in the six-county area increased by 7 percent.

Population growth for the area within 150 miles of the refuge, excluding Canada, is expected to increase by about 85,000 people between 1978-2000 (Montana Department of Community Affairs 1978, Murdock and Ostenson 1976). Potential energy developments, especially coal, could significantly impact population growth. However, the magnitude of this impact is presently unknown.

The age distribution of people residing in the region is comparable to that of Montana as a whole. Compared to the state, the region has approximately half as many physicians per person; two counties have no physicians. Only 5 percent of Montana's population resides in the six-county CMR region, making this a comparatively undeveloped area with few of the major problems faced in rapidly growing regions.

The general decline in regional population parallels a similar decrease in the number of farms between 1969-74. Although the region is still predominantly rural, it seems there is a trend toward urbanization.

Median family income for the region in 1970 averaged about \$900 less than for the state, and the number of families classified at the poverty level was higher in the region. Those who continue to farm need more land than previously to maintain their standard of living.

Approximately 7 percent of the property valuation and 6 percent of the taxable valuation in Montana is located in the six-county CMR region. Most of this value is associated with Fergus and Valley counties where more than half the regional population is concentrated.

Nearly 6 percent of the 1974 property taxes in Montana were paid by residents of the region where only 5 percent of the population lives. This is indicative of the higher per capita taxation in the region, which was slightly more than \$150 higher per person than for the state.

Public opinion surveyed at the state level tends to be conservative, as it relates to social and cultural attitudes. Billings (1977) noted, "...Montana's game animals are an acknowledged resource for residents and non-residents, and for hunters and general observers. Over 55 percent of the men and over 20 percent of the women in Montana claim to be hunters, and fewer than one in seven oppose hunting. Whether they hunt or not, approximately 70 percent of Montana's residents make special efforts to observe wildlife in its natural setting."

Comments received at public meetings, through correspondence and personal contacts conducted as part of the overall planning effort, covered the full range of management interests, from protection and

Table 11. Demographic data for counties contiguous to Charles M. Russell National Wildlife Refuge, Montana.

	Area mi ²	1960 population	1970 population	1975 population	Population /mi ² , 1970	Change 1960-70 (%)	Change 1970-75 (%)
Fergus	4,327	13,400	12,600	12,925	2.9	-6.0	+2.6
Garfield	4,812	1,800	1,714	1,781	0.4	-4.8	+3.9
McCone	2,652	3,000	2,799	2,709	1.1	-6.7	-3.2
Petroleum	1,684	800	675	659	0.4	-15.6	-2.4
Phillips	5,287	6,000	5,224	5,388	1.0	-12.9	+3.1
Valley	5,104	22,200	11,038	12,982	2.2	-50.3	+17.6
Total	23,866	47,200	34,050	36,444	1.4	-27.9	+7.0
Montana	147,138	674,767	694,409	746,244	4.7	+2.9	+11.6

Source: Bureau of Land Management 1979, Montana Department of Community Affairs 1977.

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ENVIRONMENTAL STATEMENT

GRAZING ALLOTMENTS

Note: Allotment boundaries generally fenced or have physical barriers which separate them.



LEGEND

GRAZING ALLOTMENTS

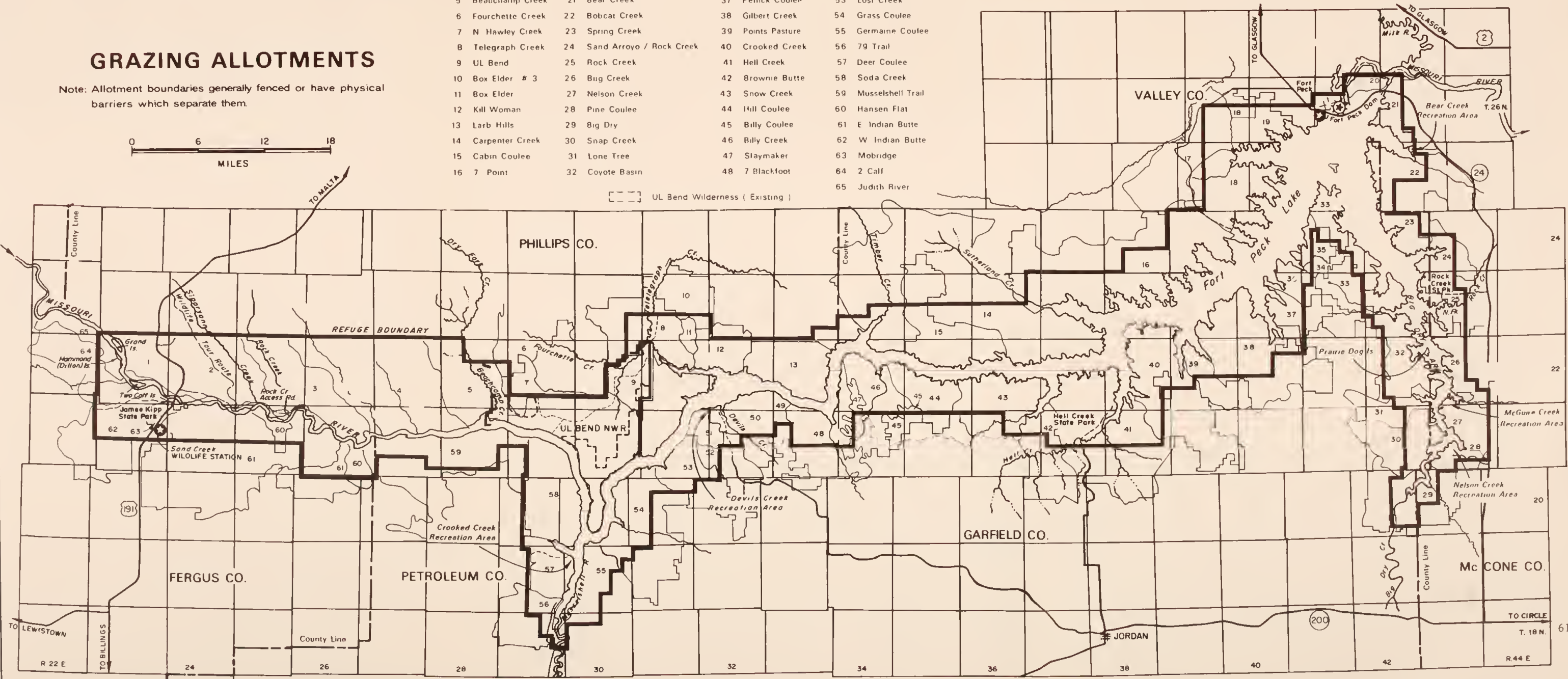
Number and Name

1 Antelope Creek	17 Silver Dollar	33 Box Creek	49 Herman Ridge
2 E Slippery Ann	18 Skunk Coulee / Mud Creek	34 Norville Creek	50 Devils Creek Common
3 Rock Creek	19 Duck Creek	35 Spring Draw	51 Ghost Coulee
4 Nichols Coulee	20 Fort Peck Common	36 Sage Creek Point	52 Deadman Coulee
5 Beauchamp Creek	21 Bear Creek	37 Penick Coulee	53 Lost Creek
6 Fourchette Creek	22 Bobcat Creek	38 Gilbert Creek	54 Grass Coulee
7 N Hawley Creek	23 Spring Creek	39 Points Pasture	55 Germaine Coulee
8 Telegraph Creek	24 Sand Arroyo / Rock Creek	40 Crooked Creek	56 79 Trail
9 UL Bend	25 Rock Creek	41 Hell Creek	57 Deer Coulee
10 Box Elder # 3	26 Bug Creek	42 Brownie Butte	58 Soda Creek
11 Box Elder	27 Nelson Creek	43 Snow Creek	59 Musselshell Trail
12 Kill Woman	28 Pine Coulee	44 Hill Coulee	60 Hansen Flat
13 Larb Hills	29 Big Dry	45 Billy Coulee	61 E Indian Butte
14 Carpenter Creek	30 Snap Creek	46 Billy Creek	62 W Indian Butte
15 Cabin Coulee	31 Lone Tree	47 Slaymaker	63 Mobridge
16 7 Point	32 Coyote Basin	48 7 Blackfoot	64 2 Calf
			65 Judith River

UL Bend Wilderness (Existing)



FIG. 9 GRAZING ALLOTMENTS



proper management of wildlife to management of CMR primarily for livestock. Individuals who rely on livestock grazing for a living favored multiple use of the refuge and minimum interference by government in cattle operations as historically practiced. In contrast, those sensitive to wildlife favored management of CMR primarily for wildlife. Special interest groups representing agriculture generally preferred to include livestock interests on a planning and advisory board for CMR and to continue grazing as in the past. Those who represented wildlife interests preferred habitat preservation for wildlife through appropriate restraints such as conservative grazing by domestic livestock. Others wanted no grazing, hunting, or roads; still others wanted mass recreation and development.

IV. ENVIRONMENTAL CONSEQUENCES

IV. ENVIRONMENTAL CONSEQUENCES

This chapter analyzes the significant environmental effects of the five alternatives discussed in Section II. The five elements or management actions common to all alternatives, which may significantly affect the environmental quality of the refuge, are endangered and unique species introduction, wildlife habitat management, recreation and cultural resources management, forage allocation, and range developments.

The following basic assumptions were made for all alternatives to facilitate analysis:

- 1) The chosen alternative would be implemented if adequate funding and manpower are made available.
- 2) After a management plan is selected, actions that are implemented would be monitored. Necessary adjustments would be made to correct those actions that are not meeting objectives.
- 3) Short-term impacts are those which would occur during implementation, approximately 1985 through 1990; long-term impacts are those projected to exist when the wildlife objectives are met (i.e. by the year 2005 or later).
- 4) Unauthorized human and livestock use would be strictly controlled under each alternative and would not be a significant factor affecting environmental quality.
- 5) Because habitat is recognized as the key to wildlife abundance, this document emphasizes habitat quality and quantity rather than wild animal population numbers or densities. Where possible, the habitat capability to support numbers of animals per unit area have been used. Establishment of high quality habitat will provide adequate populations of wildlife species within constraints imposed by drought, severe winters, disease, and other variables which are largely uncontrollable.

ALTERNATIVE A

(No Action)

SOILS-WATERSHED

Habitat management to control all burning would result in coniferous communities proceeding to climax and could increase the potential for destructive wildfires. If areas were burned, it could result in temporary loss of vegetative cover, increased runoff, and soil loss until vegetation is restored. In favorable years, fall "green-up" can occur and eliminate erosion problems on areas burned the preceding summer. Once herbaceous vegetation is restored, erosion would probably be reduced below levels associated with the coniferous forest communities. Eichhorn and Watts (1974) observed that erosion potential was less for coniferous forest sites that had been burned and replaced with a grassland community as compared to forested communities with their sparse understory vegetation.

Grazing patterns would not significantly change present ranges of bare ground (60-75 percent) on marginal breaks, badlands or shale areas, or those ranges (20-42 percent) presently existing on better quality clayey, sandy, or silty range sites. However, a present slight upward trend in range condition would provide for some increased plant and litter cover over the refuge as a whole by the year 2000. This would provide a slight enhancement to soil productivity and watershed quality as compared to present conditions.

Livestock concentration areas, particularly around watering areas, would continue to exhibit soil erosion and watershed quality problems because of poorer range conditions and trampling effects. Marginal sites that are highly fragile, such as thin breaks, badlands, and shale, would receive some livestock use under this alternative. Any use on these areas by livestock tends to increase soil or parent material loss because of vegetation cover removal and livestock movements (W. Larsen personal communication). Poorly located reservoirs would continue to silt-in at accelerated rates. Lusby (1970) found that runoff rates on Mancos shale derived soils, which react much like Bearpaw shale, averaged 30 percent less on ungrazed watersheds versus grazed watersheds, and sediment yields were about 45 percent less. His studies indicated that runoff was directly related to the percentage of bare soil on the watershed, with hydrologic changes caused by the trampling of livestock on soil loosened by frost heavings.

Although refuge-wide range condition shows a slight upward trend which would bring some long-term increase in productivity, short-term enhancement would be minimal. Soil lost as a result of accelerated (man-caused) erosion would be a long-term impact and an irretrievable loss.

WILDLIFE HABITAT-RANGE RESOURCES

Fire management would involve suppression of all wildfires. There would be no prescribed burning or "let-burn" philosophy. This could reduce the extent of several communities and eventually the diversity of wildlife habitat. The existing fisheries management program would result in no significant environmental impacts.

Wildlife habitat would not change substantially under the No Action alternative. Lack of residual cover and shrubs would remain as major problems. Wildlife population levels would remain about the same also.

Bighorn sheep habitat would be adversely affected due to grazing by cattle on winter range near Two Calf Creek (Constan 1978). Continued competition with livestock and periodic severe winters would keep sheep at low numbers and preclude any effective management program.

Sharp-tailed grouse habitat would remain in fair condition. Eighty-one percent of all samples taken in the 1978 survey indicated sharp-tailed grouse lack 8-10 inches of residual cover required for successful nesting (Christenson 1971, Sisson 1976). Habitat to support 5-10 birds/mi² would be maintained.

The quantity and quality of forbs would be limited. Insufficient forb productivity occurred on 46 percent of the areas sampled for pronghorns, and 65 percent of the areas sampled for mule deer. They feed on such plants from spring to late summer (Mackie 1970, Hoover et al. 1959, Cole and Wilkins 1958).

Vegetation around ponds would remain inadequate to provide nesting cover for waterfowl. Bent (1923), Bennett (1938), Burgess et al. (1965), and Drewien and Springer (1969) stated vegetation less than 1.5 feet tall and covering less than 75 percent of the ground is inadequate for nesting waterfowl. The Creston Valley Wildlife Management Authority (1974) cited several studies which correlated high waterfowl nesting densities and success rates with undisturbed stands of vegetation (Nelson 1972, Schranck 1966, Bue et al. 1952, Keith 1961). On 89 percent of the CMR ponds sampled in 1978, herbaceous upland vegetation was less than one foot tall and had less than 69 percent ground cover (Fish and Wildlife Service 1978). Grazing by livestock has resulted in less than optimal waterfowl habitat conditions on many potentially suitable ponds on CMR.

Rodents lacked sufficient cover on 79 percent of sites sampled, and this condition would persist. This would lower quality of hunting habitat for raptors and terrestrial carnivores.

Trampling and consumption of desirable browse species would be extensive; 75-90 percent of all areas sampled for habitat quality had inadequate browse (Fish and Wildlife Service 1978). Several livestock allotments on the Big Dry Arm demonstrate the effects of substantial livestock grazing, which has resulted in poor browse communities. Other allotments in this area that have experienced light or no livestock use in recent years have well developed browse communities. A static or downward trend in these communities would continue, meaning inadequate food and cover for sharp-tailed grouse and mule deer which rely heavily upon hardwood draws for portions of their life requirements (Severson

1966). This would help hold the sustained deer habitat capability at the estimated level of 5-6 deer/mi². The present browse communities would probably not experience the slight upward trend in condition that the refuge as a whole would experience. Shrub communities would continue to receive a disproportionate amount of livestock use, which would be reflected by static or deteriorating conditions.

Dense stands of big sage are lacking on 67 percent of the sagebrush areas sampled. These food and cover requirements are needed for pronghorns and sage grouse (Bayless 1969, Wallstead 1971, Klebenow 1969). This is especially true in Garfield and McCone counties and the central Phillips County portion of CMR, which contains the primary range for pronghorns. Silver sage, a prime winter food for pronghorns (D. Pyrah personal communication, Cole and Wilkins 1958), is lacking in the central Phillips County area. Livestock use under No Action would tend to perpetuate or expand the existing sagebrush flat areas by their use patterns (Kindschy 1977). Moderate to heavy livestock grazing during spring and summer favors shrubs such as big and silver sage at the expense of more palatable grasses and forbs (Smith 1979). The expected result would be to benefit the present sagebrush communities because of present use patterns by livestock. Although range conditions may be actually lowered in these areas, some habitat enhancement for such species as pronghorns and sage grouse could be expected because of possible sagebrush expansion.

Security cover for elk in the form of dense canopies of ponderosa pine, juniper, and pine-juniper (Campbell 1978) would continue to be inadequate on the north side of the reservoir. This lack of security cover plus the presence of numerous roads and their associated vehicular traffic causes elk to widely disperse during the hunting season, and some animals do not return. Herds would remain at their current size of 1,300-1,500 over-wintering animals. The presence of numerous roads for which no adequate control of access exists would continue to lower habitat values for elk and deer. Perry and Overly (1977) found that roads, and disturbances associated with roads, exerted a considerable influence on elk and deer use of habitat. Elk use was reduced by 95 percent and deer use by 100 percent under the most extreme case studied, which was a "main road" in a meadow situation. The lack of dense tree stands also means lack of thermal cover (Forest Service 1977).

The riparian areas along the Missouri River would be maintained for white-tailed deer through maintenance of present fences. These areas are in good condition and would remain in about the same condition (Fish and Wildlife Service 1978).

Minor riparian areas along continuous and intermittent streams across the refuge are not fenced, and thus are accessible to cattle. This would perpetuate the existing poor deciduous browse conditions for wildlife. Severson and Boldt (1978) indicated livestock use in shrubby draws results in lack of shrub production because of tight sod-bound soil, lower moisture infiltration, and higher soil temperatures.

Off-refuge impacts associated with No Action would be minimal. Habitat quality for wildlife would probably remain unchanged as a result of maintaining present livestock levels on the refuge, and wildlife objectives would not be met.

Coyotes can cause significant economic loss to ranchers. Removal of the individual animals responsible for the damage would eliminate or reduce the problem and have no lasting effects on predator populations. Avoiding control of prairie dogs or other small mammals would allow healthy, productive populations of prairie dogs and 30+ species associated with them. It would preclude any possible killing of black-footed ferrets.

The effect of coyote depredation on deer populations appears to be relative to moisture conditions and rodent levels (Dood 1978, Pyrah 1979). Dood's work in the Missouri River breaks indicated that fawn mortality was related to habitat use in the summer months. When precipitation was adequate to keep forbs green, does and their fawns used open habitat types. When moisture was inadequate, forbs dried up and does moved with their fawns into heavy timber types to use browse. Coyote depredation on fawns was higher when fawns were in the open types in all cases. Work by Pyrah showed that deer mortality from coyote depredation was less in two very severe winters as opposed to two normal or open winters. He correlated the lighter mortality in the severe winters with high-small mammal populations versus greater mortality in normal winters with low-small mammal populations. Coyotes preyed heavily on the small mammals and less so on the deer.

Inability to predict adequate moisture levels or rodent populations which affect coyote depredation on deer makes it difficult to predict the level or extent of depredation in any given year.

Continuation of present forage allocations would maintain lower than desired levels for wildlife habitat quality. Competition between wildlife and livestock for security cover and choice feeding sites would continue at present levels. Mackie (1970) observed that numbers and management of livestock should be considered on the basis of forage available on primary range areas rather than on the entire area. Livestock would be allocated forage on the basis of the entire area under this alternative. An examination of the 1952-53 range survey summary for the refuge revealed that wildlife are presently primarily allocated forage on Class VIII lands which are unsuitable for livestock use and suitable only for watershed, recreation, and wildlife values. The forage on the best areas was allocated almost solely to livestock.

Forage allocations would continue to be dominantly in favor of livestock. A slow upward trend in condition would occur over about 75 percent of the refuge. This trend would continue and would be expected to raise range conditions to excellent on 20 percent of the grazed portion of the refuge by the year 2000 (compared to the present level of 18 percent). Some range deterioration would continue as a result of overstocking on some allotments, especially in the Big Dry Arm portion of the refuge. About 10 percent of the grazed portion of the refuge would be in fair to poor condition by the year 2000 as opposed to the present figure of about 8 percent. Continued over-grazing of those allotments in deteriorated condition could compound the situation for the entire allotment, as livestock are forced to range farther from preferred range to find forage. Those allotments constitute a minority on a refuge-wide basis, however, and the overall range trend would continue to be slightly upward. Range objectives would not be met under this alternative.

The slow upward trend for the refuge as a whole would mean that additional AUMs would be available for livestock or wildlife use (minimum of 1,000 AUMs by the year 2000).

Forage allocations to livestock would continue to depress habitat values for wildlife. Habitat values for wildlife would stay at or near present levels. There would be continued heavy use of range areas by livestock near water and on level to moderately sloping terrain. Use of primary wildlife areas by livestock would be heavier than desirable in some locations near dependable water. Lack of water in other areas would minimize all livestock use. The interspersed effect thus created would have beneficial impacts on some species of wildlife. Birds of open areas, such as prairie horned larks, lark buntings, and several species of shorebirds, would benefit from livestock grazing effects. Prairie dogs and animals closely associated with prairie dog towns would benefit because localized disturbances such as overgrazing, which originally allowed establishment of the towns, would continue.

Seasons of use would continue to detract from overall range improvement potential. Several allotments have year-long grazing or early spring use authorized on a recurring basis. This type of grazing is not conducive to range improvement because the same localized areas are continuously subjected to heavy use with deterioration of plant and soil resources resulting.

No new range developments which would significantly affect wildlife and wildlife habitat are proposed under this alternative. However, maintenance of some existing range facilities would have adverse impacts on wildlife habitat. Several improvements such as ponds in hardwood draws or breaks are presently located in primary wildlife habitat. Continued maintenance of these sites in important wildlife areas might increase opportunities for game-livestock competition. Mackie (1970) felt that control of water associated with primary cattle range could serve as a tool to provide better livestock distribution and lessen opportunities for game-livestock competition. He recommended no water developments on terminal portions of larger ridges or on smaller ridges where the area available for livestock is limited. This would lower the likelihood of game-livestock competition on important wildlife range.

The retention of private cabin sites and developed recreation areas would continue to exclude a limited amount of land from use as wildlife habitat and result in attendant loss of wildlife populations that would otherwise be associated with such habitat.

RECREATION AND CULTURAL RESOURCES

Generally, this alternative would contribute the least toward meeting national and regional recreation requirements and needs identified in the Nationwide Outdoor Recreation Plan (Bureau of Outdoor Recreation 1973) and Montana Statewide Outdoor Recreation Plan (Montana Department of Fish and Game 1978). It also would accomplish little in terms of meeting recreation objectives established for CMR.

Present forage allocations would provide for undesirable aesthetic qualities in several allotments which have a considerable portion of deteriorated range. Most of these allotments are found in the Big Dry

Arm which receives a considerable amount of recreational use during the grazing season when poor range conditions are most obvious.

Maintenance of the No Action alternative would provide ample viewing opportunities of prairie dogs and other species associated with poor or fair range conditions. Some increases in visitation are anticipated from minor improvements in interpretive facilities.

Since there would be only limited development or expansion of existing recreation areas, concentrated public use would continue in the vicinity of major recreation areas, especially at COE sites near Fort Peck and along the Big Dry Arm segment of the reservoir and between Fred Robinson Bridge and Seven Mile Creek on the west.

Impacts of public use on lands adjacent to the refuge would be similar to those on the refuge where comparable conditions and facilities occur. Most roads would remain unusable in bad weather, and non-wildlife-oriented uses would predominate.

Reservoir water level fluctuations would continue to periodically inundate the headwaters area, causing alterations to wildlife habitat and associated wildlife-related recreation opportunities. Some historic buildings and archeological/paleontological sites would be lost or remain unidentified. A few of the more significant sites would likely be nominated to the National Register of Historic Places.

SOCIOECONOMICS

As mentioned previously, there are presently 60,108 federal AUMs permitted on the refuge; 3,584 of these are in a nonuse status. Additional AUMs are utilized on state and private lands located within the boundaries of the refuge and amount to about 20 percent of the federal AUMs permitted by FWS. The number of FWS permitted AUMs would remain the same for 1990 and 2005. Because this alternative does not affect the number of future AUMs on the refuge, no direct or indirect economic effects would occur due to grazing. This alternative would provide little or no impacts to operators who graze livestock on CMR. It would provide for continuance of the lifestyles to which they are accustomed and would result in minimal new governmental interference with their operations.

In 1978, recreation visitor days totaled 357,000 (Table 12). Changes attributable to this alternative would be the difference between the 1978 figures and the estimate for 1990 and 2005. The direct economic effects are estimated to be \$132,100 between 1978-90 and \$112,200 between 1991-2005. Present value of these direct effects is \$677,800. The figures are not adjusted for any anticipated price level changes.

Indirect economic effects of an additional 21 man-years of employment and \$153,900 in income would result from an increase in visitation during 1978-85. Likewise, an additional 15.5 man-years and \$117,700 in income would result from an increase in visitation between 1986 and 2000.

Table 12 summarizes the noneconomic effects which would result from implementation of the No Action alternative. A detailed economics methodology is presented in Appendix 13.

Table 12. Noneconomic effects, No Action alternative, Charles M. Russell National Wildlife Refuge, Montana.

	Present situation (1978)	No Action	
		1990	2005
Habitat quality ¹			
Sharp-tailed grouse	4.6	4.6	4.7
Mule deer	5.6	5.6	5.8
Pronghorns	5.2	5.2	5.3
White-tailed deer	5.4	5.4	5.6
Elk	6.0	6.0	6.2
Waterfowl	3.4	3.4	3.4
Development			
Burn (acres)	0	0	0
Plant trees (acres)	0	0	0
Plant shrubs (acres)	0	0	0
Soil ripping (acres)	0	0	0
Ponds (acres)	0	0	0
Fences (miles) ²			
Exclosure	0	0	0
Boundary (aprx.)	50	56	56
Interior	Unknown	0	0
Water projects (No.)			
Ponds (aprx.)	150	150	150
Troughs	13	13	13
Springs	0	0	0
Visitor days			
FWS	64,000	67,000	68,000
Other	293,000	326,000	356,000
Total	357,000	393,000	424,000
Forage (AUMs)			
Wildlife	50,000	50,000	51,000
Livestock (active) ³	56,524	56,524	56,524
Total	106,524	106,524	107,524
Range condition (%)			
Poor	1	1	1
Fair	7	8	10
Good	74	72	69
Excellent	18	19	20

¹ 0-2.5 = poor, 2.6-5.0 = fair, 5.1-7.5 = good and 7.6-10.0 = excellent.

² A precise estimate of acres enclosed/mile of fence is not provided due to presently undetermined topography and shape of exclosure.

³ A general rule of thumb is 40 acres enclosed per mile of fence. These figures represent active AUMs; 3584 AUMs are inactive; thus the total is 60,108 AUMs.

ALTERNATIVE B

(Proposed Action)

SOILS-WATERSHED

Fire management practices would result in the opening of some coniferous forest stands to increase grass, forb, and shrub levels to retard runoff and soil loss. Eichhorn and Watts (1974) observed that the evergreen litter and tree overstory of unburned sites are less effective in reducing erosion than nontree vegetation on burned sites. Grazing reductions, planting, and exclosures would provide more residual cover and shrub communities which would also retard runoff and decrease erosion.

Areas on level to moderate slopes and within one mile of water would generally receive light to moderate use by livestock because of reduced stocking levels. More fragile areas such as shale, breaks and badlands range sites, and steep terrain with over 20 percent slope gradient would receive little or no livestock grazing. Any use on these areas would tend to increase soil or parent material loss because of vegetation cover removal and livestock movements (W. Larsen personal communication). Soil erosion on these fragile areas would be reduced and essentially confined to geologic processes. Increased litter cover on areas considered to be principal livestock range would be expected.

Bare soils on the most productive range sites, such as clayey, silty, sandy, and overflow, would be lowered from the present average range of 20-42 percent to 15-25 percent by 1990. This would lower present rates of erosion by allowing increased water infiltration into the soil and reducing amounts of soil exposed to the elements. Overland runoff and sedimentation would be lowered, and water quality would be enhanced.

Boundary and interior fences would help improve soils and watershed conditions within several allotments through control of livestock. This would help improve range conditions and ultimately soils and watershed values through increased plant and litter cover. This would benefit wildlife habitat. No significant detrimental impacts are expected to occur to wildlife as a result of fence construction.

A water facility proposed for the Kill Woman allotment and approved for construction by the Soil Conservation Service, would help eliminate a head-cutting problem in one drainage through control of runoff. Other water facilities planned would result in only minor enhancement of soils and watershed conditions.

WILDLIFE HABITAT-RANGE RESOURCES

Reintroduction of black-footed ferrets and peregrine falcons would provide additional wildlife diversity on CMR and help perpetuate these two species. Reintroduction of black-footed ferrets would involve maintenance of prairie dog towns. These areas would remain in poor range condition, but would provide desirable wildlife habitat for several

wildlife species. Prairie dog expansion onto adjacent landowners' lands might necessitate control measures. Other management decisions concerning prairie dog control would be made upon completion of the present prairie dog study on CMR.

Lack of residual vegetation for cover and food is limiting to several species of wildlife. Reducing grazing 33 percent would increase residual vegetation to provide nesting and hiding cover and forage.

Reduction or elimination of livestock AUMs would occur where competition between bighorn sheep and livestock occur. There would be increased residual cover which would provide more forage for bighorn sheep. Eichhorn and Watts (1976) assessed livestock-bighorn sheep competition in the Two Calf drainage, indicating that limited winter habitat and competition with livestock have limited the success of the sheep reintroductions there. Bighorn sheep would increase in number as a result of reduced competition with livestock.

It is expected that 70 percent of potentially suitable sites would have 8-10 inches of residual cover by 1990. This would provide sharp-tailed grouse with the cover they require for nesting (Christensen 1971, Sisson 1976) and would increase spring bird populations from approximately 5 birds/mi² to a projected level of 30 birds/mi² on suitable habitat (Fish and Wildlife Service 1978). This would also provide improved shelter and protection from predation for all ground nesting birds, improved night roosting areas for sharp-tailed grouse, improved insect food sources for bluebirds, more cover for small rodents and porcupines, and a greater forage supply for mule deer, elk, and pronghorns.

Approximately 30 percent of the suitable areas would not attain this level of cover by the year 2005, because areas on level to moderate slopes and within one mile of water would receive light to moderate use by livestock. These areas would have less cover and thereby benefit species such as mountain plovers, burrowing owls, ferruginous hawks, prairie horned larks, and prairie dogs (Bureau of Land Management 1979).

Changes from sheep to cattle and changes in grazing intensities and seasons of use would increase forbs for pronghorns and mule deer by 30-35 percent. According to Mackie (1970), forbs constitute an important component in the summer and fall diet of mule deer in the Missouri River breaks. Cole (1956) made similar statements for pronghorns.

The response of small mammals to increased amounts of cover and available forage would be varied. Voles, which rely heavily on grass for food and cover, would increase while deer mice, which use plant seeds to a greater extent for food and are better adapted to sparsely vegetated areas, would probably decrease (Black 1968, R. Moore personal communication).

Prescription grazing would maintain stands of big and silver sage at present levels; different intensities of livestock use would modify plant composition to favor sagebrush (heavy use in early spring) or grasses and forbs (light or no use). This would provide enhanced fawning areas and winter cover for resident pronghorns (Bayless 1969). Different treatments would change habitat conditions to meet particular wildlife needs in terms of food or cover at critical periods of the

year. Large numbers of pronghorns move into the breaks and CMR during severe winters. When these conditions occur, pronghorns need the best possible habitat conditions to survive. Improved habitat conditions under the Proposed Action would enhance survival of the herds using the refuge at these critical periods.

Producers (1979) stated:

"Shrub dominated communities afford some of the best wildlife habitat on the CMR NWR by providing food, cover, and perches. With a few exceptions (such as rabbitbrush, sagebrush, and greasewood), shrubs are found on sites with above average moisture and low or normal soil salt levels...

"Shrubs were much more abundant on the Refuge prior to the great drought of the 1930's. Murie (1937) observed that as much as 95 percent of the buffaloberry was dead in 1935, and severe drought lasted several years after that. When attempting to establish more shrubs on the Refuge, the Manager should recognize that success will be nil in drought years, though shrubs established in prior years may persist, perhaps as a function of length of establishment...

"If shrubs are established on suitable sites, they can be expected to reproduce naturally within several years and thus colonize suitable adjacent areas. However, most shrubs are palatable to livestock and grazing could endanger not only reproduction, but survival itself. Seeded or planted areas should be protected from grazing until desired shrub abundance is achieved, and thereafter, the effects of grazing should be carefully monitored..."

Prescribed burning on approximately 7,700 acres, planting of suitable shrubs on approximately 500 acres, and construction of livestock exclosures in key hardwood draws would improve the all-important shrub communities by the year 2005. This would provide an increased food base for deer and upland game birds as well as cover for deer, sharp-tailed grouse, and several small birds and mammals.

Seventy percent of the suitable hardwood draws would have the desired shrubs by the year 2005. Because shrub responses are slower than the effects of reduced grazing upon herbaceous cover levels, continual improvement in shrub quality would occur for another 40-50 years.

Eichhorn and Watts (1974) found that burned areas in the Missouri breaks produced substantially more forbs and shrubs than unburned control sites. Those shrubs which could be enhanced on the refuge by proper fire management include rose, chokecherry, snowberry, buffaloberry, serviceberry, and skunkbrush sumac (Fish and Wildlife Service 1978). Mule deer, sharp-tailed grouse, pronghorns, and white-tailed deer would all benefit from an increased food base. There would also be summer cover for mule deer, sharp-tailed grouse, song birds, porcupines, bobcats, and elk. Winter roosting areas for sharp-tailed grouse would be enhanced as would nesting sites for passerines and winter use areas for

mule deer and bobcats. Habitat quality for sharp-tailed grouse would increase from fair to good (56 percent increase in habitat quality) by the year 2005, and mule deer habitat in hardwood draws would increase in quality by 28 percent for the same period (Appendix 14).

The few riparian zones proposed to be fenced would improve substantially. Unfenced riparian zones would receive lighter overall grazing use and re-establish riparian habitat more gradually than the fenced areas. Good habitat would be achieved by the year 2005 on these unfenced riparian areas, which include Slippery Ann Creek, Rock Creek (west), Timber Creek (east), and Fourchette, Big Dry, Squaw, and Hell creeks. Although riparian areas and ponds would continue to sustain a disproportionate share of livestock grazing, reductions in AUMs under this option would substantially reduce pressures on areas that are over-utilized. To restore and maintain vegetative quality and vigor to all important riparian areas and ponds, livestock grazing would have to be eliminated in the entire allotment or the areas completely fenced (Hormay 1976). Most of the upland ponds would still have limited value as waterfowl production areas.

Bottoms along the Missouri and Musselshell rivers would continue to remain fenced and unavailable to livestock except on a prescription basis. This would preserve the riparian community and maintain the overall wildlife habitat for white-tailed deer in good condition by the year 2005.

Phasing out of the cooperative farming program would allow the bottoms along the Missouri River to revert to a natural riparian community, benefiting some wildlife species but adversely impacting others. Mule deer habitat in the big sage-greasewood-grassland, ponderosa pine-juniper, and grassland-deciduous shrub types would be improved 34 percent by the year 2005 as a result of increased forb and shrub levels (Appendix 14). This would mean increasing the habitat's ability to support an over-wintering population of from 6-10 deer/mi² (Fish and Wildlife Service 1978). Elk populations would not change significantly as a result of the Proposed Action. Elk use large areas off the refuge which contain essential habitat components beyond CMR's control.

Overall habitat quality would increase 16-105 percent depending on wildlife species evaluated (Appendix 14). Wildlife objectives would be met. The reduction in grazing to accomplish this increase in habitat quality might result in lowering of habitat quality on private lands if landowners increase stocking rates on these lands to compensate for the loss of AUMs on the refuge.

Increasing vegetation along continuous and intermittent streams would reduce siltation and stabilize stream flows which could benefit the reservoir fishery.

Impacts from predator and animal control would be the same as the No Action alternative.

Range communities would improve from the proposed forage allocations. Approximately 25 percent of the grazed portions of the refuge would be in excellent condition by 1990, and 35 percent in excellent condition by the year 2005. Fair condition range would be reduced from the present level of 7 percent to an estimated 3 or 4 percent because of reductions in livestock on overgrazed allotments, particularly in the

Big Dry Arm area. Grazed portions of the refuge in poor ecological condition (about 1.1 percent) would not change appreciably. These areas are most commonly associated with prairie dog towns or are flood plains which are periodically disturbed by floods or ice jams. Owensby et al. (1973) found that little change occurs on poor condition range after 10 years. They estimated it would take 40 years for overgrazed range to attain excellent condition under complete rest in a precipitation zone of 25 inches annually. It is therefore unlikely that the poor condition range on the refuge would be significantly enhanced by the year 2005.

Although overutilized areas would be reduced under this alternative, some of these sites would be present as long as cattle are grazed on a seasonal or year-long basis. Areas with no livestock grazing, or those having rotation systems or prescription grazing would not have significant distribution problems because of a periodic rest cycle or total rest to facilitate vegetal response.

The proposed livestock reductions would help limit most livestock grazing to areas with a slope gradient of less than 20 percent and within one mile of water. Mackie (1970) observed that 90 percent of livestock use in the Missouri breaks was within one mile of water, and over 80 percent occurred on slopes of less than 10 degrees gradient. Allocations of forage to livestock were made taking these factors and soils limitations into consideration to eliminate range overuse by livestock on primary ranges (Appendix 15). This would provide a greater amount of forage per animal on these primary livestock ranges and reduce the need for them to range further for forage.

Light stocking levels proposed by this action would have the effect of maintaining productivity and a diversity of habitat conditions. Van Poolen and Lacey (1979) reviewed pertinent literature with respect to grazing systems and intensities on western ranges:

"Mean annual herbage production increased by 13 percent when grazing systems were implemented at moderate stocking intensities. Increases were greater (35 and 27 percent) when continuous livestock use was reduced from heavy to moderate and moderate to light, respectively. This indicates that adjustments in livestock numbers have a greater effect on herbage production than do grazing systems."

Grazing systems evaluated and compared with continuous use included rotation, deferred, rest rotation, and deferred rotation systems under moderate stocking levels (40-60 percent utilization of forage).

Klippel and Costello (1960) in a 13-year study provided an appropriate description of the effects of light grazing by livestock on vegetation.

"Light grazing, as defined in this study, was characterized by distinct patches of grazed vegetation surrounded by areas of almost ungrazed vegetation. Grazed areas had as much as 50 percent of the current growth removed. Ungrazed plants of the highly palatable species were easily found, and conspicuous stubble remained on the grazed plants. Plants of low palatability, such as three-awns, broom snakeweed, rubber rabbitbrush, and slender bush eriogonum, seldom showed grazing use."

This type of grazing by domestic livestock would provide the diversity of habitat conditions needed to achieve desired wildlife populations and diversity of species. Range objectives would be achieved with this alternative.

Klipple and Costello's description of the effects of light grazing coincides with a description of the effects of bison grazing on the National Bison Range, Montana (R. Brown personal communication). Based on this, forage allocation under this alternative could approximate grazing by bison.

Little or no livestock grazing would occur on sites more distant from water or on steeper terrain. Hardwood shrubs on these more remote areas would be able to complete their growth cycle without being affected by livestock trampling and grazing. Resultant livestock-wildlife stocking levels would tend to be somewhat in line with Mackie's (1970) management considerations for a joint use range situation, where livestock are favored on the more level ranges close to water, and wildlife are favored on steeper, more inaccessible terrain having good security cover or in areas more remote from water.

In some portions of the refuge, a scattered pattern of landownership exists between federal, state, and private land. The management of CMR will be coordinated and integrated, where feasible, with the objectives of other federal agencies, state agencies, and private landowners on and around CMR.

The Proposed Action alternative would tend to produce a diversity of habitat conditions. The desired vegetative components of residual cover and enhanced shrub production would be produced on a larger percentage of potentially suitable sites, but use patterns by livestock would ensure maintenance of habitat conditions for wildlife species having less stringent residual cover and shrub requirements. The result of grazing used as a management tool would be to maintain or alter habitat to benefit a particular wildlife species. Grazing at the proposed levels would maintain vegetative productivity and vigor, but would also provide for the necessary residual cover to meet requirements of ground nesting birds and small mammal species. Forage equivalent to approximately 69,000 AUMs would be made available for wildlife for consumption as food or for cover requirements by 1990. The refuge would be managed under the philosophy that light livestock grazing levels are not detrimental to wildlife populations (Appendix 16).

Lower grazing pressure by livestock would provide enhancement of vegetative resources in some deteriorated areas. An increase of about 5,000 AUMs of forage should be realized by the year 2005 from the improved range conditions and would be available to wildlife.

Mackie (1970) felt that the onset of livestock grazing in the Missouri breaks should be delayed until mid-May when plant growth is more advanced. Smith (1979) supported Mackie's discussion in regard to plant responses to grazing and range readiness. Some disturbance with wildlife nesting and fawning activities could be expected by allowing onset of livestock grazing in mid-May. Under the light livestock use proposed by this alternative, these disturbances are not expected to be significant. If conflicts do occur, adjustments in grazing seasons will

be made as required to minimize conflicts with wildlife. Fall and winter livestock use on range grazed by elk and deer also increases livestock-wildlife competition for forage. Such use has been identified as a problem in several allotments. Implementing later turn-in and earlier turn-out dates for livestock would mean a better opportunity to enhance habitat conditions for wildlife by allowing a higher state of range readiness in the spring before onset of livestock grazing and less competition for forage between livestock and wildlife on winter ranges.

Reduced grazing levels may have the tendency to open sagebrush stands and reduce canopy cover of sagebrush because grasses in the stand would receive less grazing pressure. Grasses have root systems better adapted to catching infiltrating water, and under normal livestock grazing pressures, grasses are selectively taken in preference to the relatively unpalatable sage. On portions of the refuge, heavy seasonal grazing would eventually result in changes in plant species composition favoring sagebrush. Under the Proposed Action, prescription grazing would be utilized to help maintain sagebrush communities if they begin to decline to benefit such species as mule deer, pronghorns, and sage grouse.

Several existing reservoirs would be enlarged and rehabilitated. This would enhance conditions for shorebirds and waterfowl. Some new fences would be constructed along the refuge boundary to control livestock and help attain desired vegetative cover levels. Some minor riparian areas across the refuge lack good shrub communities; construction of a minimum of six miles of fence would help alleviate this situation. Habitat quality would be expected to increase from fair to good as a result of this and other proposed treatments.

New recreation areas and related developments would be prohibited near sensitive wildlife habitat, and incompatible activities would be curtailed during critical nesting and breeding seasons. Most recreational development would occur at areas already disturbed by facilities.

RECREATION AND CULTURAL RESOURCES

Compared to the others, this alternative would contribute an intermediate amount toward meeting national and regional recreation requirements and needs identified in the Nationwide Outdoor Recreation Plan (Bureau of Outdoor Recreation 1973) and Montana Statewide Comprehensive Outdoor Recreation Plan (Montana Department of Fish and Game 1978). Recreation objectives identified for CMR would be satisfied.

Introduction of endangered or unique species such as peregrine falcons, black-footed ferrets, swift fox, and bighorn sheep would increase the diversity of animals available for wildlife-oriented recreation. The rare occurrence of these species, and the equally rare opportunities to view them anywhere else, would provide a once-in-a-lifetime opportunity for many visitors. Introduction of peregrine falcons would necessitate restriction of human disturbance during the breeding season (Snow 1972).

Improvement of habitat would increase the numbers of wildlife that would be observed or taken. Any stabilization of water levels in Fort Peck Reservoir that may be possible would enhance recreation, wildlife,

and fishery values and retain the approximate 21-mile reach of the Missouri River from the Fred Robinson Bridge to headwaters of Fort Peck Reservoir in a free-flowing condition. This would be accomplished, as conditions permit, without major impacts on flood control, hydropower generation, water supply, recreation, or fish and wildlife.

In addition to the cultural surveys that would be undertaken, other benefits would accrue due to the provision of a historic tour route and interpretation of numerous historical, archeological, and paleontological features throughout the refuge. Sites eligible for inclusion on the National Register of Historic Places would be identified, and areas having significant values would be designated as special districts or natural landmarks.

The proposed forage allocations would provide enhanced range conditions on a refuge-wide basis. This would enhance the aesthetic quality of the refuge and provide a higher quality recreational experience as well as a greater opportunity to recreate. Prescribed burning would result in a lowering of visual quality for 1-5 years.

The water pipeline and troughs that would be constructed about one mile from the present wildlife tour route on the west end of the refuge would help attract livestock concentrations away from the area and improve wildlife viewing potentials.

Increases in visitation would occur due to provision of various interpretive facilities, including visitor contact stations, a sail-powerboat tour route, backcountry-nature trails, and interpretive programs and displays. These uses would enable the public to acquire a better understanding of and appreciation for wildlife and related resources. The only new area to be developed would be at Fourchette Bay which would provide access and facilities for recreationists on the northwest end of the refuge. About half the additional use associated with this site is expected to be wildlife and wildlands-oriented. There would be a small increase in vehicular travel over roads leading into the refuge across BLM land and some additional use of BLM lands for recreation. Improving roads would provide better access for fishermen, hunters, and other recreationists.

Establishing scattered access sites to the reservoir over a large area would more evenly distribute use, reducing congestion at some existing sites and improving the quality of the recreation experience.

Development and use of roads and permanent recreation facilities would reduce available wildlife habitat. Perry and Overly (1977) found that vehicular use of all roads in the Blue Mountains of Washington (main, secondary, and primitive) had a significant detrimental effect on use by big game to a distance of one-half mile as compared to control plots where no roads were located. Proper planning of road systems on the refuge would serve to minimize potentially detrimental impacts to wildlife.

Proper planning of public use resulting from a management study of the Slippery Ann area would ensure a high quality recreation experience while minimizing management problems and impacts on wildlife. By permitting landing of aircraft only at specified locations on the refuge, there would be no significant conflicts with wildlife or recreationists.

SOCIOECONOMICS

Grazing would be reduced from 60,108 to 40,482 AUMs by 1990. This represents a decrease of 19,625 AUMs or about 33 percent. Between 1990-2005, grazing activities would be increased slightly from 40,482 to 40,628 AUMs. This increase would result from proposed land acquisition on CMR. The self-furnished AUMs on these lands would be converted to federal AUMs as the tracts are acquired. The direct effect of the AUM reductions from 1978-90 is estimated at a negative \$347,000 in sales. This direct effect would be sustained almost entirely by permittees who use the refuge. The possible consequences of implementing the Proposed Action upon individual permittees who graze livestock on the refuge are shown in Appendix 10.

As Appendix 10 discusses, while the average impact under the Proposed Action to the ranchers would be about 3 percent, eleven ranchers, who have substantially higher than average dependency, will be impacted more severely.

Table 13 shows the project levels of annual visitation for years 1990-2005. Direct and indirect annual economic effects in terms of sales are +\$162,911 for 1985 and +\$488,520 for year 2005. This translates into a gain of 4 workers per year in the 1978-90 period, and an additional 11 workers per year in the 1991-2005 period.

The net direct plus indirect effects (combination of grazing losses and recreation gains) of the Proposed Action is a loss of \$763,579 in sales and 9 workers annually in the 1978-90 period. The loss in sales is \$451,320 and employment is 2 workers annually in the years 1991-2005. Both result in a change in employment of less than 1 percent.

Table 13 summarizes the non-economic effects which would result from implementation of the Proposed Action.

There are about 800 acres of cropland on the refuge used primarily for hay production. Assuming a hay price of \$50 per ton and a 1 ton per acre yield, gross revenue would total \$40,000 per year. With production costs at \$30 per ton, net revenue would be about \$16,000 per year. If the loss of this feed required importation of an equal amount of livestock feed, the cost per ton would be about \$16 more than local prices, thus, creating an added cost to producers of about \$12,800 per year.

Table 13. Noneconomic effects, Proposed Action alternative, Charles M. Russell National Wildlife Refuge, Montana.

	Present situation (1978)	Proposed Action	
		1990	2005
Habitat quality ¹			
Sharp-tailed grouse	4.6	5.8	7.2
Mule deer	5.6	6.8	7.2
Pronghorns	5.2	6.5	7.4
White-tailed deer	5.4	6.5	7.4
Elk	6.0	7.0	7.6
Waterfowl	3.4	4.2	7.0
Development			
Burn (acres)	0	1900	7700
Plant trees (acres)	0	0	0
Plant shrubs (acres)	0	100	500
Soil ripping (acres)	0	0	0
Ponds (acres)	0	3	3
Fences (miles) ²			
Exclosure	0	2	6
Boundary (aprx.)	50	91	97
Interior	Unknown	21	21
Water projects (No.)			
Ponds (aprx.)	150	153	153
Troughs	13	23	23
Springs	0	0	0
Visitor days			
FWS	64,000	70,000	73,000
Other	293,000	326,000	360,000
Total	357,000	396,000	433,000
Forage (AUMs)			
Wildlife	50,000 ³	69,000	74,000
Livestock (active)	56,524	40,482	40,628
Total	106,524	109,482	114,628
Range condition (%)			
Poor	1	1	1
Fair	7	7	4
Good	74	67	60
Excellent	18	25	35

¹ 0-2.5 = poor, 2.6-5.0 = fair, 5.1-7.5 = good and 7.6-10.0 = excellent.

² A precise estimate of acres enclosed/mile of fence is not provided due to presently undetermined topography and shape of exclosure. A general rule of thumb is 40 acres enclosed per mile of fence.

³ This figure represents active AUMs; 3584 AUMs are inactive totaling 60,108 AUMs.

ALTERNATIVE C

(Intensive Wildlife Management)

SOILS-WATERSHED

Fire management practices would result in the opening of some coniferous forest stands to increase grass, forb, and shrub levels to retard runoff and soil loss. Eichhorn and Watts (1974) observed that the evergreen litter and tree overstory of unburned sites are less effective in reducing erosion than nontree vegetation on burned sites. Planting and exclosures would provide more residual cover and shrub communities which would also retard runoff and erosion.

Forage allocations under this alternative would considerably enhance soils and watershed. Livestock grazing would total about 27,000-30,000 AUMs and would remove considerably less forage compared to present levels. This would provide more litter cover on traditional primary livestock areas. Water infiltration into the soil would be higher, soil compaction and runoff lower, and bare soil exposed to wind erosion considerably less. These adverse impacts are cumulative over the years and continue from year to year, although they may be lessened by rest from grazing.

Marginal sites that are highly fragile, such as thin breaks, badlands, and shale would receive little or no use, and soil erosion would be minimized. Any use on these areas by livestock tends to increase soil or parent material loss because of vegetation cover removal and livestock movements (W. Larsen personal communication).

Approximately 300 miles of boundary fence would control all livestock movements within the refuge and improve range conditions and therefore, soils and watershed.

Ripping of all suitable panspots and dense clay range sites outside proposed or designated wilderness areas would improve watershed quality and reduce soil erosion through increased plant and litter cover. Ripping would allow greater water infiltration into the soil, making it available for plant uptake. This increased water supply would enhance site productivity and lower amounts of exposed soil.

Soil productivity would be considerably enhanced because of reductions in rates of soil erosion and soil ripping operations. Increased plant and litter cover resulting from improved range conditions and soil ripping operations would provide nearly optimal watershed conditions for the whole refuge.

WILDLIFE HABITAT-RANGE RESOURCES

The general grazing pattern proposed in this alternative would probably keep prairie dogs and their associated species at their present level (C. Knowles personal communication). Knowles inferred that maintenance and expansion of prairie dog populations is dependent upon man-caused disturbances such as livestock grazing, reservoirs, holding

corrals, or wells. This is supported by McEneaney and Jensen (1974) and BLM (1979), who noted that the presence of prairie dogs is most likely a symptom, rather than a cause, of deteriorating range. Prescription grazing would be employed as necessary to manipulate habitat for these species.

Since grazing would generally be on a prescription basis, bighorn sheep and cattle conflicts would be eliminated. There would be no conflicts between buffalo and bighorn sheep since they would occupy different habitat.

Lack of residual vegetation for cover and food is limiting to several species of wildlife. Using prescription grazing as a tool would increase residual vegetation to provide nesting and hiding cover and forage for wildlife.

The limited livestock grazing allowed would result in an increase of residual cover to 8-10 inches on 80-90 percent of the suitable sites by 1990. This would provide suitable nesting cover (Christenson 1971, Sisson 1976) for an optimum number of sharp-tailed grouse in the springtime (30-35/mi²). It would also benefit a wide range of species described under the Proposed Action alternative.

Eliminating livestock grazing, except on a prescription basis, would provide more forbs for pronghorns and mule deer and increase this aspect of habitat quality for both species by 30-45 percent (Appendix 14). According to Mackie (1970), forbs constitute an important component in the summer and fall diet of mule deer in the Missouri River breaks. Cole (1956) reported similar findings for pronghorns. Mackie (1970) also reported that forbs comprised an important component in diets of cattle during spring, summer, and fall.

Increased grass and forb production in sagebrush communities would be expected under light grazing with a gradual "opening" of the stand as the shrubs mature and die. This would be detrimental to wintering populations of pronghorns, sage grouse, and mule deer. However, prescription grazing by livestock early in the spring (April 15-June 15) would be employed for two or three years or longer as required to reverse any trend toward grass and forb dominance in a stand. Livestock would select the palatable grasses and forbs over sage, thus providing the sage with a competitive edge in succeeding years. Some lowering of wildlife habitat quality (residual cover levels) may occur in pastures subjected to livestock grazing in a given year.

Wildlife species such as chestnut-collared longspurs, prairie horned larks (Owens and Myres 1973), and mountain plovers (Smith 1940), which benefit from lower quality residual cover levels, could be detrimentally affected by this action. However, prescription grazing would be employed to provide habitat conditions to benefit these species.

Key shrubs are lacking for use as food as well as cover and perches. Prescribed burning on approximately 15,000 acres, planting of suitable shrubs on approximately 3000 acres, construction of temporary wildlife exclosures in key hardwood draws, and prescription grazing would improve important shrub communities. Prescription grazing alone would probably not provide for sufficient response by shrubs within the desired time frame, especially since shrubs are limited in distribution at present. The proposed planting and burning would provide for establishment of

shrubs on a substantial portion of CMR. Eventual expansion through natural reseeding from the planted or burned areas would help meet objectives for wildlife in terms of shrub quantity and quality. Ninety percent of the potentially suitable hardwood draws would have desired shrub densities by the year 2005. Because shrub responses are slower than effects of reduced grazing upon residual cover levels, continual improvement in shrub quality would occur for another 40-50 years.

Several other species would benefit from burning and planting. They include sharp-tailed grouse (improved roosting cover, Sisson 1976), mountain bluebirds (grass and open areas, Balda 1975, Miller 1970), and porcupines (improved ground cover, Costello 1966). Prescribed burning combined with prescription grazing would improve sharp-tailed grouse and mule deer habitat to meet or exceed wildlife habitat objectives for these species before the year 2005.

Most of the river bottoms along the Missouri and Musselshell rivers are presently excluded from livestock use. They should be near their full potential by 1985. It is estimated that 80 percent of potentially suitable areas in these drainages would be at or above desired levels for tree and shrub composition by the year 2000. Vegetation around stock watering reservoirs should have the 8-10 inches desired residual cover on 75-80 percent of suitable areas by the year 2005. This alternative would provide the fastest response for recovery toward climax, short of artificially reseeding affected areas and totally resting them.

T. Planz (personal communication) estimated that waterfowl production at UL Bend alone would be increased from 200 to 2,000 birds with intensive management. No figures are available for the entire refuge, but it would be expected that similar results could be achieved on a limited basis at other areas of the refuge. Some sites would be slower to respond because of the present degree of dominance by increaser and invader plant species.

All smaller streams with adequate water sources should have substantially improved riparian zones. This would be assisted with temporary fences to exclude wildlife where necessary.

More intensive farming in conjunction with improved riparian areas would provide optimum food and cover levels for many species of wildlife. Mule and white-tailed deer, raccoons, sharp-tailed grouse, ring-necked pheasant, turkeys, mourning doves, waterfowl, and most all other wildlife species would take advantage of these farm plantings to supplement their food supply. It is anticipated that elk would be drawn to these areas and reduce their use of adjacent private crops.

Extensive tree planting would provide maximum security cover and reduce displacement of elk from human and livestock disturbance. This tree planting would be done to improve habitat in Valley County where tree cover is presently considered to be inadequate.

Overall habitat quality could be expected to increase 25-165 percent over the 20-year period, depending upon the species evaluated (Appendix 14). Wildlife objectives would be met. The increase in habitat quality and capability to support wildlife which would occur as a result of reductions in livestock grazing may result in lowering of

habitat quality on adjacent lands if private landowners increase stocking rates of their lands to compensate for loss of AUMs on the refuge.

Improving vegetation on continuous and intermittent streams would reduce siltation and stabilize stream flows. Establishment of spawning habitat on Fort Peck Reservoir could make fish reproduction possible. This could reduce the need for stocking operations and increase the fishery resource. Impacts from coyote and prairie dog control would be the same as the No Action alternative.

Livestock grazing would be based primarily upon known plant responses to grazing levels and seasons of use. Spring-summer use in alternate years would provide stimulation of vigor and production from grazing, with rest periods providing storage of food reserves by plants. Grazing in this manner would provide a significant degree of enhancement of climax plant species (Smith 1979). Smith (1979) and Hormay (1980) indicated that two years of rest following grazing is necessary for enhancement of vegetative cover on the refuge. The desired results to be achieved in terms of residual cover and habitat quality for wildlife would determine the extent of deviation from the prescription grazing system described above. For example, several years of moderate to heavy grazing might be required to promote habitat conditions for some wildlife species.

Other site specific habitat treatments such as prescribed burning would improve those areas for species needing vegetative conditions other than climax. In most situations, approximately the same number of livestock would be assigned to a given allotment or pasture as are presently assigned. However, two years of total rest out of three as proposed by Smith (1979) would effectively reduce present annual livestock AUM levels by about two-thirds. Livestock grazing is currently conducted at moderate levels on a refuge-wide basis. Employing the above concepts refuge-wide would mean an initial reduction in federal AUMs to approximately 23,000 by 1990. Grazing on state and private inholdings would remain at present levels. By the year 2005, many state and private inholdings would be acquired by exchange or purchase and converted from self-furnished to federal AUMs. These AUMs would then be changed to a prescription basis or retired. By the year 2005, most grazing would be on a prescription basis, except of remaining inholdings. Livestock levels would probably fluctuate between 27,000-30,000 AUMs. By itself, prescription grazing would not significantly enhance habitat quality over grazing levels in the Proposed Action. The proposed intensive treatments of planting, burning, and ripping would be the primary contributing factors involved in improving wildlife habitat.

Approximately 87,500 AUMs would be allocated to wildlife for food and cover requirements by 1990, with about 107,000 AUMs available to wildlife by the year 2005.

This pattern of grazing might eliminate use by small, family-owned ranching operations which depend heavily upon AUMs supplied by the refuge (Appendix 10). It would mean elimination of most allotments in their present form. Some larger operators would continue in a semblance of their former status. Livestock operations under this alternative

would conceivably be run by 15-20 large ranches or corporations which are not highly dependent upon federal lands. Individuals, ranching operations, or associations having a few to several hundred AUMs would possibly be eliminated in favor of large scale operations desiring to utilize a minimum of 1,000 or more AUMs during the grazing season. It is estimated that approximately 13 operators would be forced out of business by this alternative (Appendix 10). Additional economic information is not available, and economic consequences could be greater, as stated in the Proposed Action alternative. Range objectives would not be met under the Intensive Wildlife Management alternative.

Virtually all the desired areas on the refuge would approach excellent range condition by the year 2005. Poor and fair condition range would take substantially longer to reach excellent condition. Owensby et al. (1973) reported findings from a Kansas study where little improvement was noted on deteriorated ranges after ten years following fencing. The authors estimated recovery time to excellent condition to be 40 years, even with complete rest and in a precipitation zone of 25 inches annually. Gradually, however, even this depleted range would be restored to its full potential if desired. Wildlife objectives might dictate that these areas be maintained at a lower range condition.

All existing grazing systems would be drastically affected by this new grazing program. The program would employ a type of grazing which would benefit soils, watershed, and wildlife values.

Prescription grazing would be used as necessary to maintain habitat conditions at desirable levels to benefit species such as mule deer, sage grouse, or black-tailed prairie dogs which have habitat needs of other than climax vegetation. Species such as sharp-tailed grouse would benefit from the general grazing pattern.

The graze-rest cycle would provide the optimal situation for shrub enhancement. This alternative, together with shrub plantings on 3,000 acres and prescribed burning on 15,000 acres, would help produce maximum shrub enhancement within a minimum period of time. It is estimated that 90 percent or better of the suitable sites would be in the desired condition within 50 years, and 75 percent of suitable areas would be at or above desired levels for shrubs by the year 2005. Limited grazing and proposed shrub management practices would increase the habitat's ability to support an over-wintering population from 6-15 deer/mi².

Bison would also be introduced into the UL Bend area in suitably fenced areas and replace cattle as a principal large grazer.

Range developments to be implemented include mechanical ripping of as much as 38,000 acres of dense clay and panspots range sites. This acreage is an estimate of those areas lying outside designated wilderness, which have potential for treatment because of salt content, low water infiltration rates, and sparse vegetation. A two- to five-fold increase in vegetative biomass is possible by ripping on favorable sites (C. Clark personal communication). Wight et al. (1978) reported an increase in herbage production of 165 percent, with 10 percent more plant-available soil water on panspots sites in southeast Montana following ripping of the soil surface. J. Rogers (personal communication)

stated similar results are normally obtained through breaking the surface of panspots by ripping or furrowing. These improvements are expected to occur on the 38,000 acres proposed for ripping. The perched water table often present on these sites would be eliminated; water would be allowed to percolate through the soil profile and would help flush out accumulated salts; increased quantities of water would be available for plant uptake. Greater site productivity would occur as a result. Ripping this acreage would increase the carrying capacity of the refuge by a minimum of 3,000 AUMs.

About 200 miles of boundary fence would be constructed. This fence would limit livestock access onto the refuge and maintain desired levels of livestock to accomplish grazing objectives for habitat improvement. Construction of a boundary fence may impede some wildlife movement, but this would be partially compensated for by removal of numerous existing interior fences.

New recreation areas and related developments would be prohibited near sensitive wildlife habitat, and incompatible activities would be curtailed during critical nesting and breeding seasons. Most recreational development would occur at areas already disturbed by facilities. Eliminating private cabins and establishing wildlife habitat on these areas would improve conditions for wildlife on the refuge.

RECREATION AND CULTURAL RESOURCES

Compared to the others, this alternative would contribute somewhat less than the Proposed Action and No Grazing alternatives toward meeting national and regional recreation requirements and needs identified in the Nationwide Outdoor Recreation Plan (Bureau of Outdoor Recreation 1973) and the Montana Statewide Outdoor Recreation Plan (Montana Department of Fish and Game 1978). It would still meet recreation objectives identified for CMR.

Increases in wildlife accompanying this action would provide some additional recreation opportunities in the form of viewing, photographing, and hunting. The establishment of bison on the refuge would restore a sight familiar to the area in the 1800's, and provide the visitor with a living reminder of the animals that once flourished here. Introduction of peregrine falcons would necessitate restriction of human disturbance during the breeding season (Snow 1972).

Limited conflicts between recreation users and livestock would decline as livestock levels are reduced. Livestock damage to culturally or historically significant areas would decrease. There would be little interference between camper-hunters and livestock on some recreation areas. Because bison would be contained in fenced areas, there would be no conflicts with recreationists or cultural resources.

Ripping of dense clay and panspots range sites would have an adverse effect on visual resources for a minimum of 3-5 years. Prescribed burning would result in a lowering of visual quality for 1-5 years.

Visitors would be able to view bison, and limited hunting opportunities would be possible as the population produced a harvestable surplus.

Due to increased use of refuge roads, there would be corresponding increase in vehicular travel over roads leading into the refuge across

adjoining BLM and private land. Proper planning in terms of a road system transportation plan would minimize potentially detrimental wildlife impacts. As a result, some additional use of BLM lands for recreation would occur. In addition, private land owners would be expected to receive increased demand from recreationists seeking to travel through their land or hunt. Reductions in livestock grazing levels on the refuge would probably result in a less tolerant attitude on the part of area ranchers toward any increased recreation use on adjacent private lands and a corresponding increase in closure of these lands to public use.

Moderate expansion of existing major recreation areas would create a minimum amount of disturbance to the landscape. Eliminating private cabin developments and restoring the land to wildlife habitat would reduce the number of people recreating on the refuge. The Service and the Corps of Engineers will adhere to National Environmental Policy Act and P.L. 91-646 in the event any cabin leases are terminated before expiration date. Under the provisions of these laws, displaced cabin owners are entitled to just compensation for their losses, including costs of relocations. The same would apply to high and low density recreation areas, which would involve less development than under the Proposed Action alternative.

Except for the degree of recreational development and use anticipated with this alternative, there would be about the same types of impacts as envisioned with the Proposed Action alternative. There would be some exceptions, however, since only nature trails and no backcountry trails would be established. Also, there would be less impact on cultural resources since damage by livestock would be reduced.

SOCIOECONOMICS

This alternative would decrease annual livestock AUMs by 37,285 or as much as 67 percent during 1978-1990 period. Such a reduction would cause an annual loss of \$725,000 in sales to the CMR ranchers, and a reduction in hired labor of 2.8 workers. This represents a 6.8 percent average reduction in gross income or sales to the ranchers. This alternative would have a larger than average adverse impact to the eleven high-dependency ranchers on the CMR. The direct plus indirect effects on sales and employment is nearly 2 million dollars and 27 workers. While the absolute amounts are large, the regional significance is quite small.

Appendix Table 17a shows the annual visitation by category for the years 1990-2005. Direct plus indirect effects of the losses in recreation visitation (compared to the No Action alternative) is annual losses of \$162,911 in sales and 4 workers in the 1978-1990 period, and annual losses of \$1,086,072 in sales and 24 workers in the 1991-2005 period.

The net total effect (sum of livestock and recreation direct and indirect effects) is an annual 2 million dollar loss in sales and 31 workers in the 1978-1990 period, and 2.7 million dollars and 48 workers in the 1991-2005 period. While in absolute terms the intensive wildlife management action has the largest negative impacts, they are still regionally insignificant (less than 1 percent change).

Table 14. Noneconomic effects, Intensive Wildlife Management alternative, Charles M. Russell National Wildlife Refuge, Montana.

	Present situation (1978)	Intensive Wildlife Management	
		1990	2005
Habitat quality ¹			
Sharp-tailed grouse	4.6	6.8	8.0
Mule deer	5.6	7.3	8.0
Pronghorns	5.2	6.6	7.1
White-tailed deer	5.4	7.0	8.1
Elk	6.0	7.5	8.0
Waterfowl	3.4	7.0	9.0
Development			
Burn (acres)	0	3,800	15,000
Plant trees (acres)	0	6,250	25,000
Plant shrubs (acres)	0	800	3000
Soil ripping (acres)	0	0	38,000
Ponds (acres)	0	225	900
Fences (miles)			
Exclosure ²	0	13	52
Boundary (aprx.)	50	50	450
Interior	Unknown	0	0
Water projects (No.)			
Ponds (aprx.)	150	160	210
Troughs	13	13	13
Springs	0	0	0
Visitor days			
FWS	64,000	69,000	107,000
Other	293,000	321,000	333,000
Total	357,000	390,000	404,000
Forage (AUMs)			
Wildlife	50,000 ₃	87,500	107,000
Livestock (active)	56,524	22,823	26,833
Total	106,524	110,323	133,833
Range condition (%)			
Poor	1	1	1
Fair	7	7	4
Good	74	67	15
Excellent	18	25	80

- ¹ 0-2.5 = poor, 2.6-5.0 = fair, 5.1-7.5 = good and 7.6-10.0 = excellent.
² A precise estimate of acres enclosed/mile of fence is not provided due to presently undetermined topography and shape of exclosure. A general rule of thumb is 40 acres enclosed per mile of fence.
³ These figures represent the active AUMs; 3584 AUMs are inactive totaling 60,108 AUMs.

ALTERNATIVE D

(Multiple Use)

SOILS-WATERSHED

Fire management practices would have the same consequences as the No Action alternative.

Temporary livestock reductions in several allotments plus soil ripping practices would provide moderate enhancement of soil productivity in treated areas. Areas not receiving these grazing or mechanical treatments could expect a slight improvement in conditions. Watershed quality enhancement would show similar trends.

An initial drop of about 4,500 active livestock AUMs below present levels would occur in response to a need for enhancing present range conditions within several allotments. These decreases would occur primarily in the Big Dry Arm portion of the refuge where the most serious range condition problems are present. The effect of this temporary reduction would be to help eliminate an estimated 50 percent of the deteriorated range conditions on the refuge. Overland water runoff would be substantially lowered on these areas because of increased plant and litter cover, with soil erosion lowered as a result. Expected increases in litter and plant cover would be somewhere between present levels and those expected under the Proposed Action alternative. This in turn would place erosional rates for this alternative between the No Action and Proposed Action alternatives. Increased plant and litter cover would allow cycling of more minerals and nutrients through the soil.

The 38,000 acres proposed for ripping would have higher productivity, as previously discussed under other alternatives. Additional water developments, fencing, and implementation of new grazing systems geared to specific allotment needs should serve to improve soils and watershed conditions primarily as a result of increased plant and litter cover which will reduce soil erosion and overland runoff. Although some proponents of rest-rotation grazing might point out that implementation of such systems refuge-wide would improve soils and watershed, an examination of available literature does not reveal a clear-cut distinction between this and other grazing systems. Gifford and Hawkins (1976) evaluated nine separate studies that reflected impacts of various grazing systems, including rest-rotation, on plant or litter cover. They concluded that published evidence failed to show that any one grazing system consistently or significantly increases plant and litter cover on watersheds. A more realistic situation would require evaluation of allotment deficiencies and implementation of grazing systems designed to overcome those specific deficiencies.

Soil resources would be more adversely impacted by this alternative than by the Proposed Action due to the significantly greater amount of visitation expected to occur. Increased vehicular traffic in the back-country areas of the refuge could result in higher rates of erosion and rutting of access roads.

WILDLIFE HABITAT-RANGE RESOURCES

Under this option, prairie dog control would have a short-term detrimental effect on the prairie dogs through direct reductions in populations. There would be indirect effects on various species dependent upon dog towns for portions of their life requirements; burrowing owls would have fewer home sites and raptors and terrestrial predators a smaller food base. Potential dens for black-footed ferrets would be eliminated.

Peregrine falcons would benefit as a result of slight increases in residual cover to increase suitable habitat for prey species.

There would be some competition between bighorn sheep and cattle. This would be especially detrimental if sheep were confined to a limited range also used by cattle, as in fall-winter use allotments where forage might be in short supply.

Lack of residual vegetation for cover and food is limiting to several species of wildlife. New grazing systems, seasons of use, temporary livestock reductions, and habitat manipulation practices would provide a low to moderate amount of improvement in range and wildlife habitat quality across CMR. A smaller percentage of the refuge would remain in excellent condition as range improvement programs provide increased livestock access to formerly inaccessible areas. Areas of overuse would improve condition-wise as new improvements allow for better livestock distribution.

An estimated 50 percent of all potentially suitable sites on the refuge would have the desired 8-10 inches of residual cover by the year 2005 as a result of temporary reductions to enhance range condition and various treatments proposed under this action. This would provide suitable nesting sites for sharp-tailed grouse and provide spring breeding bird densities of approximately 10 birds/mi² and benefit several other species as described under the Proposed Action alternative. It would help improve overall sharp-tailed grouse habitat from fair to good condition. Areas that would not have 8-10 inches of residual cover include those key livestock areas within one mile of water on level to moderate slopes that are used on an annual, seasonal basis during summer months. These areas would have fewer forbs and grasses.

Residual and emergent vegetation in and around ponds located on the refuge would continue to receive heavy use under livestock grazing during warm, dry weather. Pond development at UL Bend would cause some increase in waterfowl population levels.

Livestock grazing practices would be expected to result in maintenance or possibly a slight expansion of existing sage communities to benefit pronghorns and sage grouse, which, according to Wallstead (1971), Eng and Schladweiler (1972), and Bayless (1969), require areas of dense big sage (20-30 percent canopy coverage) for use throughout the year. An estimated 50 percent of the allotments having habitat shrub potential levels of good-excellent would reach these levels by the year 2005.

Riparian areas grazed on an annual, seasonal or continuous basis would continue to receive heavy livestock use, and only fenced areas

would develop riparian communities of value to wildlife. Limited improvements in shrub communities would be realized on allotments where rotation systems of grazing are implemented.

Key shrubs are lacking for use as food as well as cover and perches. Burning to enhance shrubs on 400 acres by 1990, and a total of 1,500 acres by the year 2000 plus planting shrubs on 300 acres by the year 2005, would result in slight increases in shrubs. This would provide food and cover for mule deer but no significant changes in the habitat's ability to support an over-wintering population of mule deer.

Overall habitat quality would increase 4-120 percent over the 20-year period, depending upon species evaluated (Appendix 14). Wildlife objectives would not be reached.

Habitat quality, and therefore capability to support wildlife, would be increased only slightly over the present situation for most species. This situation, coupled with some increases in livestock grazing on the refuge, would mean little or no change in quality of habitat on adjacent lands.

The small improvement in riparian habitat would not significantly improve stream flows in continuous and intermittent streams or the fishery resource of the reservoir.

Rough terrain on the refuge limits effectiveness of fixed wing aircraft predator control. The use of helicopters would be more efficient but is also limited to some degree by topography. Aerial hunting combined with other types of control would reduce coyote populations on an annual basis, but the effects would not be expected to permanently alter the coyote population. Impacts from prairie dog control would be the same as the No Action alternative. Coyote control for protection of other wildlife would have no significant impacts on coyote populations. Other small mammal control would have the same impacts as the Intensive Wildlife Management alternative.

Forage allocations would provide enhancement of those allotments in deteriorated condition by substantial livestock reductions until improvements occur. Other allotments in good to excellent ecological condition would receive few, if any, reductions. Livestock AUMs would be increased as range conditions improve; initially approximately 50 percent of the AUMs in each allotment would be allocated to wildlife. Any increases in forage production resulting from improved range conditions would be allocated to resource values for which the greatest need exists (livestock, wildlife, watershed). Range objectives would not be achieved with this alternative as wildlife objectives would not be realized.

Approximately 18 allotments would receive increases in use. About 7,000 AUMs of forage would be available for livestock and 4,500 for wildlife on the UL Bend NWR that is presently ungrazed. Total federal livestock AUMs would be about 52,000 active by 1990. Improved range conditions and range improvement programs would allow an increase in livestock use to a minimum of 61,260 active federal AUMs by the year 2005. This level would be increased as range conditions improve or where it is demonstrated that wildlife needs are being met. State and private land would be allowed additional AUMs, as conditions permit. It is felt that these areas are nearly stocked to capacity at present, and any increases in AUMs would be small.

Temporary reductions in livestock use in deteriorated areas would help shrub production and establishment. Under seasonal or continuous grazing, which would be retained for most allotments, no significant increases in shrub production would occur, and trampling of shrubs would continue to be a problem.

Approximately 12 additional allotments under seasonal, continuous, or year-long use would be put into a rotation (deferred or rest) system of grazing. Fencing and water developments would be constructed in these and other allotments as needed.

Many of the remaining allotments have size, topographic, or other constraining factors which would preclude adoption of grazing systems which incorporate periods of rest. Under seasonal or continuous use, proposed stocking levels would continue to provide some limitation to shrub abundance and quality. However, better distribution of livestock through range improvement projects and increases in range condition would provide a gradual rate of enhancement because of improved forage conditions on so-called primary livestock range areas. Improved conditions on these areas could lower livestock use on more remote and rugged areas where competition with wildlife would be more likely.

Reservoir, spring, and pipeline development would create about 90 new watering facilities on the refuge by the year 2005. This would provide improved livestock distribution and eliminate some deteriorated conditions on present concentration areas. However, all water facilities would still receive a disproportionate amount of use under seasonal grazing systems and would not achieve desired wildlife cover levels. Under a grazing system where rest intervals are provided, desired cover levels would probably be met at least during deferred or rest phases of the cycle. Some fencing of reservoirs would occur in pastures used on a seasonal basis to improve habitat conditions.

Other developments such as boundary fences would eliminate excessive numbers of livestock which tend to move onto the refuge during hot, dry weather. Interior fences would be constructed to implement new grazing systems to benefit range conditions, wildlife habitat, and livestock management. No significant detrimental impacts to wildlife are expected to occur as a result of fence construction. Ripping of 38,000 acres would create a minimum 3,000 AUMs of additional forage for wildlife and livestock. Additional forage, stocking within authorized levels, and better water distribution would reduce grazing pressure on those areas which are presently substandard in terms of residual vegetation and achieve desired levels of 8-10 inches of cover on 50 percent of potentially suitable areas by the year 2005.

The season of use for livestock would be provided to meet the individual operator's needs as much as possible, while considering growth needs of major forage plant species and critical wildlife values.

Effects of livestock grazing under various grazing systems have been observed to be both beneficial and detrimental to wildlife (Appendix 16). Stevens (1966) and Mackie (1970) found that elk in Montana prefer areas which have had little use by cattle and that their movements are influenced by presence of cattle. Skovlin et al. (1968) found that elk use in the Blue Mountains of Oregon was significantly less on

range cohabited with cattle than in areas where cattle use was restricted. Rates of elk use decreased as cattle stocking increased, but moderate cattle stocking inhibited elk as much as heavy cattle stocking. Skovlin and Harris (1970) found that elk preferred season-long cattle ranges to deferred rotation ranges when cattle stocking was light. However, elk preferred heavily stocked deferred rotation ranges to heavily stocked season-long ranges. Knowles (1975) found that elk tended to concentrate in areas not grazed by cattle on the Nichols Coulee allotment of CMR. Wittinger (1978) reported similar findings in the Salmon River drainage of Idaho. This distribution pattern suggests that land use competition occurs between elk and cattle. Knowles (1975) also suggested that limited mobility of mule deer made them vulnerable to any situation which resulted in intensive use of their home range by other ungulates. Intensive livestock grazing could therefore have detrimental impacts upon mule deer populations.

In looking at impacts of rest-rotation upon smaller forms of wildlife, Gjersing (1975) indicated that both breeding pairs of ducks and broods increased in response to periodic relief (rest-rotation) from grazing. This alternative would be expected to significantly affect wild ungulates by increasing opportunities for competition for forage. Social intolerance would be an important factor which would lower habitat quality for mule deer and elk. Sharp-tailed grouse would be adversely affected by lower residual cover levels in some areas. Some benefits to mule deer and sage grouse could be expected in terms of improved sagebrush communities for winter forage. Livestock feeding patterns would tend to maintain or expand existing communities. Prairie dogs and their associated species are expected to benefit from the Multiple Use alternative which would maintain heavy livestock use areas in a disturbed condition. The net effect is expected to be a slight improvement over existing conditions (Appendix 14) for most wildlife species but considerably below the potential that exists if other alternatives are implemented. This alternative would not accomplish the wildlife objectives for CMR.

With the following exceptions, there would be the same recreational impacts as envisioned with the Proposed Action alternative. Development of a major backcountry (nonmotorized) trail as well as establishment of primitive campsites and sport fishing access sites at various locations throughout the refuge would increase dispersed recreation use and result in some conflicts with wildlife due to the greater number of people using remote sections.

Construction of a perimeter shoreline scenic road in the vicinity of Fort Peck would destroy a significant area of prime elk habitat and would probably cause a reduction in the herd. There also would be occasional disturbance of sharp-tailed grouse in spring when they use dancing grounds. Proper planning and implementation of a refuge transportation plan would minimize detrimental impacts to wildlife.

RECREATION AND CULTURAL RESOURCES

Of the five alternatives considered, this alternative would contribute the greatest amount toward meeting national and regional recreation requirements and needs identified in the Nationwide Outdoor Recreation Plan (Bureau of Outdoor Recreation 1973) and Montana State-wide Outdoor Recreation Plan (Montana Department of Fish and Game (1978). Recreation objectives approved for CMR would be satisfied.

Introduction of peregrine falcons would necessitate restriction of human disturbance during the breeding season (Snow 1972). Habitat improvements would be minor, therefore wildlife hunting and viewing opportunities would not change significantly.

Forage allocations under the Multiple Use alternative would provide an initial reduction in livestock AUMs to allow range recovery in several allotments. This would provide visual enhancement of these areas as perennial mid-grass species begin to replace perennial short-grasses and annual forbs and grasses. Increases in livestock levels to 7,000-7,500 AUMs on UL Bend NWR would lower pristine qualities of this portion of the refuge for some people where no livestock are presently grazed. Increased livestock use would increase opportunities for conflict between recreation and livestock grazing on high use recreation areas.

Ripping of dense clay and panspots range sites would cause a visual intrusion for a minimum of 3-5 years. Other range developments such as interior fencing and construction of new reservoirs could lower environmental quality of the refuge for those individuals desiring a natural setting. Prescribed burning would result in a lowering of visual quality for 1-5 years.

In addition to those impacts discussed under the Proposed Action alternative, there would be increased use resulting from designation of a backcountry foot and horse trail running the length of the refuge and expansion of low density recreation areas. Expansion of interpretive facilities and attendant increases in wildlife-wildlands activities would present a more favorable image of the refuge to a greater number of people than with any of the other alternatives.

Due to the larger number of people who would recreate on the refuge under this alternative, there would be some conflicts between recreationists. With more vehicular traffic on existing and proposed roads including a shoreline drive, there would be greater maintenance requirements, increased erosion, and increased conflicts with wildlife. Due to increased use of refuge roads, there would be a corresponding increase in vehicular travel over roads leading into the refuge, across adjoining BLM and private lands, and some additional use of BLM lands for recreation. Some increased recreation is expected off the refuge as a result of implementation of this alternative.

SOCIOECONOMICS

This alternative would reduce AUM's granted to refuge permittees by 26 percent during the 1978-1990 period, and by 12 percent in the 1991-2005 period. The direct loss to the ranchers under this alternative averages 2.3 percent in sales or gross income during the 1978-1990

period. The impact to two high dependency ranchers will be much greater. The direct and indirect effects are a loss of \$664,830 in sales and 9 workers during the 1978-1990 period. These direct and indirect losses in sales will be reduced to \$210,930 a year and 3 workers in the 1991-2005 period.

Increases in recreation visitation due to the multiple use alternative would have a direct plus indirect increase in sales of \$651,643 and +14 workers in the 1978-1990 period. This increase in sales would increase to 1.8 million dollars in the 1991-2005 year period, while employment would increase 40 workers.

The net total effects (sum of the direct plus indirect effects for both livestock and recreation) is a small gain in sales of \$13,817 and an increase of 5 workers in the 1978-1990 period. The combination of reduced livestock impacts and rising visitation causes regional sales to rise to \$1.6 million dollars and 37 workers in the 1991-2005 period.

Consequences
Multiple Use

Table 15. Noneconomic effects, Multiple Use alternative, Charles M. Russell National Wildlife Refuge, Montana.

	Present situation (1978)	Multiple Use	
		1990	2005
Habitat quality ¹			
Sharp-tailed grouse	4.6	4.8	5.3
Mule deer	5.6	5.9	6.5
Pronghorns	5.2	6.0	6.6
White-tailed deer	5.4	5.7	6.9
Elk	6.0	6.1	6.4
Waterfowl	3.4	4.5	7.5
Development			
Burn (acres)	0	400	1,500
Plant trees (acres)	0	0	0
Plant shrubs (acres)	0	100	300
Soil ripping (acres)	0	0	38,000
Ponds (acres)	0	225	900
Fences (miles) ²			
Exclosure	0	2	10
Boundary (aprx.)	50	60	72
Interior	Unknown	32	40
Water projects (No.)			
Ponds (aprx.)	150	167	227
Troughs	13	23	26
Springs	0	2	2
Visitor days			
FWS	64,000	72,000	88,000
Other	293,000	333,000	370,000
Total	357,000	405,000	458,000
Forage (AUMs)			
Wildlife	50,000	58,000	60,000
Livestock (active)	56,524 ³	52,096	61,260
Total	106,524	110,096	121,260
Range condition (%)			
Poor	1	1	1
Fair	7	7	4
Good	74	74	80
Excellent	18	18	15

¹ 0-2.5 = poor, 2.6-5.0 = fair, 5.1-7.5 = good and 7.6-10.0 = excellent.

² A precise estimate of acres enclosed/mile of fence is not provided due to presently undetermined topography and shape of exclosure. A general rule of thumb is 40 acres enclosed per mile of fence.

³ This figure represents active AUMs; 3584 AUMs are inactive totaling 60,108 AUMs.

ALTERNATIVE E

(No Grazing)

SOILS-WATERSHED

Proposed fire management practices would result in opening of coniferous forest areas with increased grass and forb levels to retard runoff and soil loss. Elimination of grazing and implementing treatments such as planting and construction of temporary exclosures would provide more residual cover and shrub communities which would also retard runoff and decrease erosion. There would be no forage allocated to livestock under this alternative.

Soil erosion rates from man-caused actions would be minimal by the year 2005, following removal of all livestock from the refuge. Geologic erosion on steep or fragile sites would continue but at decreased levels because of increased plant and litter cover. It is not known if the decreased rates of erosion on these fragile sites would constitute a significant difference from present rates.

Soil erosion from overland runoff and wind is expected to decrease because of increased plant or litter cover. Bare ground exposed on more favorable range sites such as clayey, sandy, silty, or overflow, could be expected to average 15 percent or less by 1990, and 5 percent or less by the year 2005. These levels have been achieved on similar range sites presently excluded from livestock use, whereas estimates of samples of grazed range sites in 1978 indicated an average of from 20-42 percent bare ground on the respective range sites for all samples taken.

Soil erosion rates would be minimal as they relate to accelerated erosion. Soil ripping practices plus increased plant and litter cover levels following removal of all livestock from CMR would provide attainment of the highest potential soils and watershed conditions on a refuge-wide basis. However, increased litter cover would provide for greater risk of uncontrollable wildfire. Litter accumulation may provide the necessary fuel for burns which may be hot enough to kill perennial grass species. Uncontrolled wildfires could conceivably result in massive soil losses through erosion, especially if vegetation is killed.

About 10,000 acres of accessible dense clay and panspots range sites would be treated by the year 2005. Such treatment would provide greater water infiltration, less overland runoff, a significant increase (two- to five-fold) in vegetative production, and improved soil properties. The increased vegetative cover, in addition to reducing erosion, would provide additional forage and security cover for wildlife.

Interior fences would be allowed to deteriorate or would be removed and reservoirs on marginal sites allowed to fill with silt. Gradual reduction in grazing through the year 2005 would provide an accelerated rate of return to natural conditions with man-caused erosion effectively eliminated by the year 2005. Geologic erosion would continue actively on the more fragile and susceptible sites such as breaks and shale areas.

The refuge boundary fence would serve to prevent all livestock use on refuge lands and maintain soil and watershed quality. No significant detrimental impacts to wildlife are expected to result from boundary fence construction. Impacts of recreation and cultural resources would be the same as for the Proposed Action alternative.

WILDLIFE HABITAT-RANGE RESOURCES

Lack of residual vegetation for cover and food is limiting to several species of wildlife. Complete lack of grazing would provide adequate amounts (8-10 inches) of residual vegetation on almost all suitable sites. This would mean adequate nesting and hiding cover for sharp-tailed grouse, other ground nesting birds, and some small mammals and forage for elk, mule deer, and pronghorns. However, species such as the prairie dog would show a decline from the No Grazing action.

Reintroduction of black-footed ferrets and peregrine falcons would add diversity to wildlife on the refuge and help in re-establishing these endangered species.

Elimination of grazing and associated disturbances would mean a reduction in the number and size of prairie dog towns. As a result, it would reduce habitat for such unique species as burrowing owls and mountain plovers as well as the potential success of swift fox and black-footed ferret reintroductions. It would provide more favorable conditions for bighorn sheep (Eichhorn and Watts 1976). There would be a maximum percentage of suitable sites for sharp-tailed grouse to nest, and thus, a probable increase in sharp-tailed grouse. Habitat to support white-tailed deer would be excellent. Waterfowl numbers would increase somewhat while habitat to support pronghorns would decrease. Small mammals and birds show varied results to different grazing levels or lack of grazing depending upon their respective habitat requirements. Ground squirrels are discouraged from using heavy stands of tall grasses (Smith 1940). Pocket gophers prefer deteriorated range because of greater numbers of tap-rooted and bulbous-rooted plants (Buechner 1942). Meadow mice favor climax or near climax conditions (Vories and Taylor 1940).

Smith (1940) found that nongame birds quickly disappeared from overgrazed lands in the mixed grass prairie. Weatherill and Keith (1969) found that moderate grazing may improve habitat for such species as mountain plovers and western meadowlarks. Owens and Myres (1973) found that disturbance of a fescue grassland by mowing or cattle grazing reduced or eliminated Bairds' sparrow and Sprague's pipit, but did not affect savannah or clay-colored sparrows and western meadowlarks and permitted ingress of prairie horned larks and chestnut-collared longspurs.

Range deterioration may reduce populations of some native birds and allow an increase of insects that damage residual grass (Daubenmire and Daubenmire 1968). Page et al. (1978) found that Nevada and California habitats had generally lower densities and numbers of species of nongame wildlife on grazed versus ungrazed areas.

Residual cover for sharp-tailed grouse nesting would eventually be at a level of 8-10 inches on 95-100 percent of all suitable sites by elimination of livestock grazing. Some areas would have 10-12 inches of residual cover. This would greatly accelerate overall habitat improvement from fair to excellent for this species.

Effective management of sagebrush flats would be limited with no livestock grazing. Removal of livestock would eliminate a key tool in manipulation of sagebrush communities because of livestock preference for grasses and forbs over browse. The shrub canopy in these stands would be expected to decrease with time to canopy cover ranges of 5-20 percent. Grass and forb enhancement would occur. Value as critical winter range could decline slightly as a result of reduction in sagebrush stands, while increased forb and grass production would make these communities more valuable for some wildlife during remaining seasons.

This option would provide maximum benefit to wildlife species associated with climax conditions. Those species associated with seral stages would suffer from loss of habitat, and populations would suffer moderate declines. However, wildlife objectives would be met.

Because livestock grazing would be eliminated on the refuge, adjacent landowners might stock their own lands above carrying capacity levels. This heavy stocking could cause the most severe degradation of wildlife habitat on adjacent lands for any of the five alternatives. Range objectives would not be met with this alternative.

No livestock grazing would provide optimal rates of return to climax conditions by the year 2005. Minor drainages that have the potential of supporting riparian communities would do so under this alternative. Construction of temporary fences to exclude wildlife until shrubs are re-established, and planting of shrubs would improve riparian conditions on treated sites. The final result would be an increase in habitat condition from good to excellent on sites capable of supporting a riparian community. The same would apply to upland ponds as suitable waterfowl habitat.

Key shrubs are lacking for use as food as well as cover and perches. No livestock grazing, when combined with prescribed burning-browse reseeding (11,300 acres) and seedling planting (500 acres), would provide excellent opportunities to reach desired shrub community levels. Desired shrub levels would be met or exceeded on 60 percent of potentially suitable sites by the year 2005 and on all suitable areas in 40-50 years.

Prescribed burning would increase deciduous browse which is vital as a source of mule deer winter food. K. Hamlin (personal communication) indicated forbs are important to mule deer in all snow-free seasons. Eichhorn and Watts (1974) found that shrub and forb production on wildfire burns in the Missouri River breaks was substantially higher than on unburned control areas. Burning to increase shrubs and forbs would help increase ability of the habitat to support over-wintering populations of over 12 deer/mi².

Effects of increased burning in nonsagebrush communities and reduced levels of sagebrush on sagebrush flats would be somewhat offsetting to mule deer habitat. Deer would tend to make higher use of deciduous shrubs enhanced by burning for winter forage to replace sage, which is presently heavily used in the winter.

Tree planting would occur on 4,700 acres with impacts similar to the Intensive Wildlife Management alternative. Overall habitat quality would increase 13-144 percent over the 20-year period, depending upon species evaluated (Appendix 14). The refuge contains only a portion of the biological unit for elk; therefore, the elk population would not increase significantly, as it would be controlled by off-refuge factors.

All riparian areas would improve to their maximum potential along intermittent and continuous streams and would improve the fishery resource more than any other alternative.

Impacts for all animal damage control would be the same as the No Action alternative.

Federal livestock AUMs would be reduced by about 10 percent/year until the total elimination of livestock occurred. All state and private AUMs would be eliminated by the year 2005. All forage would be available for wildlife to fulfill habitat needs for food and cover by the year 2005. Habitat quality resulting would be such that it could support a sharp-tailed grouse spring breeding bird density of 35-40 birds/mi². In addition, grass and especially forb levels, would increase for use by pronghorns, sage grouse, and mule deer.

Impacts to wildlife habitat of implementing this alternative would be somewhat similar to the Proposed Action alternative, except that all AUMs would be provided to wildlife for food and cover. No prescription grazing by livestock would be allowed, and this would limit the scope of habitat management treatments to benefit wildlife species associated with seral stages of vegetation. The scope of improvements proposed would be less than for Intensive Wildlife Management. There is less likelihood that all wildlife objectives would be met or exceeded with this alternative.

With no forage allocated to livestock, it is possible that overall site productivity and vigor would decline slightly on a refuge-wide basis, since litter accumulations would lower the rate of seedling establishment and stifle new shoot growth on mature plants. However, a study of livestock exclosures in the Nichols Coulee area of the refuge does not lend support to one theory (Cosby 1978) that nonuse results in range stagnation. Clipping studies of livestock exclosures on the refuge protected from livestock grazing for approximately 12 years reveal no such range stagnation from nonuse. These excluded areas instead have higher productivity than similar sites which are grazed by livestock under a rest-rotation grazing system (Oldemeyer et al. 1980).

Ripping as much as 10,000 acres of dense clay and panspots range sites would improve vegetative productivity and residual cover levels for wildlife.

Impacts of recreation on wildlife habitat-range resources would be the same as described under the Proposed Action.

Short and long term vegetative productivity would be optimized by implementation of this alternative. Overall wildlife habitat quality would be optimized for climax habitat conditions and lowered significantly in terms of habitat diversity.

RECREATION AND CULTURAL RESOURCES

As with the Proposed Action, this alternative would contribute an intermediate amount toward meeting national and regional recreation requirements and needs identified in the Nationwide Outdoor Recreation Plan (Bureau of Outdoor Recreation 1973) and the Montana Statewide Outdoor Recreation Plan (Montana Department of Fish and Game 1978). Recreation objectives identified for CMR would be met.

Introduction of peregrine falcons would necessitate curtailment of human disturbance during the breeding season (Snow 1972) in three small areas. However, these areas are in the backcountry and presently receive only limited public use. Habitat management would provide some increased viewing and hunting opportunities. Effects of forage allocations would be similar to those provided under the Intensive Wildlife Management alternative, except that complete removal of livestock would enhance aesthetic qualities of the refuge for some recreationists. The complete removal of livestock from refuge lands would cause adverse reaction from adjacent landowners; they would close more of their land to public use.

Removal or deterioration of all existing internal range improvements would improve visual quality for wildlife-wildlands recreation. Impacts from ripping would primarily be associated with furrowing on upper soil horizons. These effects would last a minimum of 3-5 years. Prescribed burning would result in a lowering of visual quality for 1-5 years.

Impacts of this alternative would be about the same as those discussed for the Proposed Action. However, the primary difference between the two alternatives would be a small improvement in the quality of the recreation experience under the No Grazing alternative due to a reduction in conflicts between livestock and humans where they exist. Also, cultural resources would be subject to less disturbance, resulting in greater protection of sites and structures.

SOCIOECONOMICS

Federal AUMs would decrease from 60,108 in 1978 to 30,000 in 1990. AUMs would be reduced to zero between 1990-2005. Direct effects of these reductions on refuge ranchers is a loss in gross income of sales of \$567,000 or 5.3 percent loss in sales on the average during the 1978-1990 period. These adverse impacts would increase the loss in sales to 1.2 million dollars, averaging 10.5 percent during the 1991-2005 period.

Obviously, the eleven highly dependent ranchers would be adversely affected to a substantial degree. Of the eleven economically viable high dependence ranchers, the largest individual impact would be a 74 percent reduction in sales if the No Grazing alternative was adopted. The next largest individual impact would be a 60 percent reduction in sales.

The direct and indirect effects of the livestock portion of the No Grazing alternative would be a reduction in regional sales of 1.5 million

Table 16. Noneconomic effects, No Grazing alternative, Charles M. Russell National Wildlife Refuge, Montana.

	Present situation (1978)	No Grazing	
		1990	2005
Habitat quality ¹			
Sharp-tailed grouse	4.6	6.8	8.6
Mule deer	5.6	7.0	7.5
Pronghorns	5.2	5.9	6.3
White-tailed deer	5.4	6.8	7.9
Elk	6.0	7.0	7.8
Waterfowl	3.4	6.0	8.3
Development			
Burn (acres)	0	2,800	11,300
Plant trees (acres)	0	1,175	4,700
Plant shrubs (acres)	0	125	500
Soil ripping (acres)	0	0	10,000
Ponds (acres)	0	0	0
Fences (miles) ²			
Exclosure	0	2	6
Boundary (aprx.)	50	50	450
Interior	Unknown	0	0
Water projects (No.)			
Ponds (aprx.)	150	150	150
Troughs	13	13	13
Springs	0	0	0
Visitor days			
FWS	64,000	71,000	74,000
Other	293,000	327,000	361,000
Total	357,000	398,000	435,000
Forage (AUMs)			
Wildlife	50,000	80,000	130,000
Livestock (active)	56,524 ³	30,000	0
Total	106,524	110,000	130,000
Range condition (%)			
Poor	1	1	1
Fair	7	7	4
Good	74	67	15
Excellent	18	25	80

¹ 0-2.5 = poor, 2.6-5.0 = fair, 5.1-7.5 = good and 7.6-10.0 = excellent.

² A precise estimate of acres enclosed/mile of fence is not provided due to presently undetermined topography and shape of exclosure. A general rule of thumb is 40 acres enclosed per mile of fence.

³ This figure represents active AUMs; 3584 AUMs are inactive totaling 60,108 AUMs.

dollars and a loss in employment of 21 workers during the 1978-1990 period. These losses would increase to 2.9 million dollars and a loss of 43 workers in the 1991-2005 period.

Direct and indirect effects on recreation and tourism in sales is positive. Direct plus indirect sales would increase by \$271,518, and employment would increase by 6 workers in the 1976-1990 period. During the 1991-2005 period, direct plus indirect effects would increase sales \$597,340 and employment of 13 workers.

The net total effect (sum of livestock and recreation direct plus indirect effects) is a loss of 1.2 million dollars in sales and 15 workers in the 1978-1990 period. This adverse effect increases to 2.398 million dollars and a loss of 30 workers in the 1991-2005 period. The change in regional employment is less than 1 percent.

V. LIST OF PREPARERS AND REFERENCES

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VI. CONSULTATION AND COORDINATION

VI. CONSULTATION AND COORDINATION

Public participation during this EIS process began in 1977, when a group with diverse interests and backgrounds in natural resources toured the refuge and provided management recommendations. A steering committee was established with members comprised of representatives from BLM, MDFW&P, COE, MDSL, FWS, and Montana State Department of Natural Resources. This steering committee has been involved throughout the planning and EIS process.

Public meetings were held in several Montana cities in April 1978 to determine significant issues on the refuge and to get public involvement in formulating long range goals for the refuge. Additional meetings were held by COE in June 1979, and joint meetings involving both COE and FWS were held in September 1979 to obtain public participation immediately prior to EIS preparation. Additional agency and public participation will be obtained as part of the formal EIS review process.

The EIS has been provided to several agencies and organizations, many of whom have already contributed substantially to its preparation (Table 17). Additionally, 950 copies have been sent to legislators, interested individuals, media, and local libraries.

Table 17. Agencies and organizations which provided comments on the draft EIS, Management of Charles M. Russell National Wildlife Refuge, Montana.

<u>Agencies</u>	
<u>Members of Congress</u>	
U.S. Senator	Max Baucus
U.S. Senator	John Melcher
U.S. Representative	Ron Marlenee
Montana State Senator Mark Etchart	
<u>Federal Agencies</u>	
Advisory Council on Historic Preservation	
Charles M. Russell NWR Advisory Committee	
Department of Agriculture, Soil Conservation Service	
Department of the Air Force	
Department of the Army, Corps of Engineers	
Department of Commerce, National Oceanic and Atmospheric Administration	
Department of Housing and Urban Development	
Department of Interior	
Bureau of Land Management	
Geologic Survey	
Heritage Conservation and Recreation Service	
National Park Service	
Department of Transportation	
U.S. Coast Guard	
Environmental Protection Agency	

State Agencies or Affiliates

Montana Cooperative Extension Service
Montana Department of Fish, Wildlife, and Parks
Montana Department of Livestock
Montana Department of Natural Resources and Conservation
Montana Department of State Lands
Montana Historical Society
Montana Public Lands Council
Montana State University
Office of the Governor, Montana

Organizations and Local Agencies

American Wilderness Alliance
Animal Protection Institute of America
Defenders of Wildlife
Ecology Center of Southern California
Fort Peck Cabin Association
Garfield County Commercial Club
Garfield County Commissioners
Garfield-McCone Legislative Association
Glasgow Chamber of Commerce and Agriculture
Humane Society of the United States
Last Chance Audubon Society
Lewistown Bowhunters Association
Miles City Area Chamber of Commerce
Montana Association of Conservation Districts
Montana Association of State Grazing Districts
Montana Chapter, Wildlife Society
Montana Natural Resource Clinic
Montana Stockgrowers Association, Inc.
Montana Trappers Association
Montana Wilderness Association
Montana Wildlife Federation
National Audubon Society
National Cattlemen's Association
National Wildlife Refuge Association
National Woolgrowers Association
Natural Area Council
Natural Resources Defense Council, Inc.
The Sierra Club
Valley County Development Council
Wilderness Society
Wolf Point Chamber of Commerce and Agriculture

SUMMARY OF COMMENTS RECEIVED FOLLOWING REVIEW OF THE FIRST DEIS

A total of 396 letters was received during or after the comment period which ended on December 5, 1980, although letters received after that deadline were also accepted. Of the total letters received, 4 were from legislators, 25 from Federal and State agencies, 33 from various organizations, and 334 from individuals. Included in the letters received from individuals were 196 which were almost identical to that of Ms. Cindy Davis, 53 almost identical to that of Mr. and Mrs. Adams, and 57 similar to that of Mr. Walter Collins. Of these three groups, the letters of Ms. Davis, Mr. and Mrs. Adams, and Mr. Collins were considered representative and are the only ones printed.

Responses were required to many of the letters. These letters, along with the responses, are printed at the end of this document. Also printed are letters that did not require a response. Letters are arranged in the following order: government agencies, legislators, state agencies, organizations, and individuals. Statements in each letter requiring a response are numbered in consecutive order on the right-hand side. The responses which immediately follow the letter correspond to these numbers.

Public hearings were held on October 28, 29, 30, and November 3, 1980, to receive comments on the DEIS. These hearings were held in Missoula, Lewistown, and Glasgow, Montana, and Washington, D.C. A total of approximately 300 persons attended these hearings, and 49 statements were presented.

Transcripts of the hearings, all unprinted correspondence, and attachments to letters not printed are on file at U.S. Fish and Wildlife Service, Wildlife Resources, P.O. Box 25486, Denver Federal Center, Denver, CO 80225.

SUMMARY OF CHANGES FROM THE FIRST DEIS

Editorial and factual changes have been made throughout the text as a result of the draft review process. Tables have been corrected where necessary, and in some instances, moved to more advantageous locations.

Three major changes in the new DEIS include:

The economics have been reevaluated, and the text including Appendices has been rewritten to more accurately reflect the expected impacts.

The Proposed Action has been clarified regarding prescription grazing by allotment.

The planning process and methods utilized for arriving at grazing recommendations have been explained in greater detail to facilitate understanding and review.

VII. APPENDICES

VII. APPENDICES

Appendix 1. Section 7 evaluation, Charles M. Russell National Wildlife Refuge, Montana.

Alternatives in this EIS may affect one to three endangered species: black-footed ferrets, peregrine falcons, and bald eagles. Section 7 of the Endangered Species Act states that all federal agencies shall consult with the Secretary of the Interior on the following items: 1) review and utilize existing programs to further the purposes of the act; 2) carry out programs for the conservation of endangered or threatened species; and 3) ensure that their actions do not jeopardize such species or result in modification or destruction of their critical habitat.

This consultation involves filling out standard Section 7 forms. These forms are then forwarded through administrative channels. Actions that are determined not to affect endangered species can be retained by the regional office or forwarded to Washington. Actions that may affect endangered species are sent to Washington for review. Actions determined to have a significant adverse or beneficial effect on endangered species are referred to the Director of FWS for his decision to ensure that they and their habitats receive full consideration. The following forms are the first step in this Section 7 process.

No Action alternative

1. Region: 6
2. Designation: 6-1-80-C
(region-area-FY)
3. Program(s): refuges and wildlife (R&W), CMR
4. Listed species or their critical habitats considered:
Species are the same within the action area and adjacent to the action area.
Black-footed ferret, American peregrine falcon, and bald eagle.
5. Name and description: Charles M. Russell National Wildlife Refuge Environmental Impact Statement.
6. Location: Charles M. Russell National Wildlife Refuge, Montana.
7. Objectives of the action:
 - a. Maintain habitat for black-footed ferrets.
 - b. Monitor peregrine falcon use of wintering areas near Fort Peck.
 - c. Maintain existing migration habitat for bald eagles.
8. Explanation of impacts of action on listed species or their critical habitats (attach supporting biological data):
 - a. None. No ferrets are known to occur and their habitat is secure.

Appendix 1. (Cont'd.)

- b. None. Current use is by migrants that utilize migrating ducks and small passerines as a food source.
- c. None.

9. Conclusion:	May Affect	Will Not Affect
Black-footed ferret		X
American peregrine falcon		X
Bald eagle		X

10. Recommendation (including action modification):

Continue monitoring existing use by peregrine falcons and bald eagles.

Proposed Action alternative

1. Region: 6
2. Designation: 6-1-80-C
(region-area-FY)
3. Program(s): R&W, CMR
4. Listed species or their critical habitats considered:
Species are the same within the action area and adjacent to the action area.
Black-footed ferret, American peregrine falcon, and bald eagle.
5. Name and description: Charles M. Russell National Wildlife Environmental Impact Statement.
6. Location: Charles M. Russell National Wildlife Refuge, Montana.
7. Objectives of the action:
 - a. Maintain habitat for and reintroduce a minimum of six pairs of black-footed ferrets on six or more prairie dog towns as soon as ferrets are available.
 - b. Reintroduce peregrine falcons and maintain two peregrine falcon eyries by 1990 and a third by the year 2005.
 - c. Maintain existing migration habitat for bald eagles and determine feasibility of establishing a breeding population on CMR.
8. Explanation of impacts of action on listed species or their critical habitats (attach supporting biological data).
 - a. Black-footed ferrets could be managed, protected, and propagated on CMR. Their habitat, prairie dog towns, would remain static or increase slightly to fulfill the ferrets' habitat requirements.

Appendix 1. (Cont'd.)

- b. Peregrine falcons would be managed, protected, and propagated. CMR would provide an excellent area to reintroduce them. Habitat for nesting would not change, but peregrines' food sources would be increased as a result of more residual ground cover which would allow more ground nesting passerines.
- c. If areas are identified, management actions could be taken to enhance bald eagle nesting.

- | | | |
|---------------------------|------------|-----------------|
| 9. Conclusion: | May Affect | Will Not Affect |
| Black-footed ferret | X | |
| American peregrine falcon | X | |
| Bald eagle | X | |
10. Recommendation (including action modification):
Accomplish objectives by the year 2005.

Intensive Wildlife Management alternative

- 1. Region: 6
- 2. Designation: 6-1-80-C
(region-area-FY)
- 3. Program(s): R&W, CMR
- 4. Listed species or their critical habitats considered:
Species are the same within the action area and adjacent to the action area.
Black-footed ferret, American peregrine falcon, and bald eagle.
- 5. Name and description: Charles M. Russell National Wildlife Refuge Environmental Impact Statement.
- 6. Location: Charles M. Russell National Wildlife Refuge, Montana.
- 7. Objectives of the action:
 - a. Maintain habitat for and reintroduce a minimum of six pairs of black-footed ferrets on six or more prairie dog towns as soon as ferrets are available.
 - b. Reintroduce peregrine falcons and maintain two peregrine falcon eyries by 1990 and a third by the year 2005.
 - c. Maintain existing migration habitat for bald eagles and determine feasibility of establishing a breeding population on CMR.
- 8. Explanation of impacts of action on listed species or their critical habitats (attach supporting biological data):

Appendix 1. (Cont'd.)

- a. The black-footed ferret, as an endangered species, could be managed, protected, and propagated on CMR. Their habitat, prairie dog towns, would remain static or decrease slightly.
- b. The peregrine falcon would be managed, protected, and propagated. CMR would provide an excellent area to reintroduce the species. Habitat for nesting would not change but the peregrines' food source would be increased as a result of more residual ground cover which would allow more ground nesting passerines to be available as a food source.
- c. Cottonwood trees could be planted to provide nesting sites along the shoreline on Fort Peck Reservoir in protected bays and given special attention (protection, water, shade, fence) until they are 5-10 years old. The annual fluctuation in reservoir levels may prevent trees from becoming established. Cattle use may destroy the trees before they become established. Artificial nesting structures could be used until the trees are tall enough.

- | | | |
|---------------------------|------------|-----------------|
| 9. Conclusion: | May Affect | Will Not Affect |
| Black-footed ferret | X | |
| American peregrine falcon | X | |
| Bald eagle | X | |
10. Recommendation (including action modification):
Accomplish objectives by the year 2005.

Multiple Use alternative

1. Region: 6
2. Designation: 6-1-80-C
(region-area-FY)
3. Program(s): R&W, CMR
4. Listed species or their critical habitats considered:
Species are the same within the action area and adjacent to the action area.
Black-footed ferret, American peregrine falcon, and bald eagle.
5. Name and description: Charles M. Russell National Wildlife Refuge Environmental Impact Statement.
6. Location: Charles M. Russell National Wildlife Refuge, Montana.

Appendix 1. (Cont'd.)

7. Objectives of the action:
- Maintain habitat for and reintroduce one pair of black-footed ferrets on one of the larger prairie dog towns at UL Bend as soon as ferrets are available.
 - Reintroduce peregrine falcons and maintain two peregrine falcon eyries by 1990 and a third by the year 2005.
 - Maintain existing migration habitat for bald eagles.
8. Explanation of impacts of action on listed species or their critical habitats (attach supporting biological data):
- Only one pair of ferrets could be maintained under this option because prairie dog control would be carried out as needed.
 - Peregrine falcons would be managed, protected, and propagated. CMR would provide an excellent area to reintroduce the species. Habitat for nesting would not change but the peregrines' food source would be decreased as a result of less residual ground cover which would allow fewer ground nesting passerines to be available as a food source.
 - None.
9. Conclusion:
- | | May Affect | Will Not Affect |
|---------------------------|------------|-----------------|
| Black-footed ferret | X | |
| American peregrine falcon | X | |
| Bald eagle | | X |
10. Recommendation (including action modification):
Accomplish objectives by the year 2005. Modify grazing in areas of proposed introduction of ferrets and falcons so as not to adversely affect each specie's food base.

No Grazing alternative

1. Region: 6
2. Designation: 6-1-80-C
(region-area-FY)
3. Program(s): R&W, CMR
4. Listed species or their critical habitats considered:
Species are the same within the action area and adjacent to the action area.
Black-footed ferret, American peregrine falcon, and bald eagle.
5. Name and description: Charles M. Russell National Wildlife Refuge Environmental Impact Statement.

Appendix 1. (Cont'd.)

6. Location: Charles M. Russell National Wildlife Refuge, Montana.

7. Objectives of the action:

- a. Maintain habitat for and reintroduce a minimum of six pairs of black-footed ferrets on six or more prairie dog towns as soon as ferrets are available.
- b. Reintroduce peregrine falcons and maintain two peregrine falcon eyries by 1990 and a third by the year 2005.
- c. Maintain existing migration habitat for bald eagles and determine the feasibility of establishing a breeding population on CMR.

8. Explanation of impacts of action on listed species or their critical habitats (attach supporting biological data):

- a. The black-footed ferret, as an endangered species, would be managed, protected, and propagated on CMR. Their habitat, prairie dog towns, would decrease slightly because no grazing would occur to help retard vegetative growth around dog towns.
- b. The peregrine falcon would be managed, protected, and propagated. CMR would provide an excellent area to reintroduce the species. Habitat for nesting would not change but the peregrines' food source would be increased as more residual ground cover is provided to enhance habitat values for such prey as passerine birds.
- c. If areas are identified, management actions could be taken to enhance bald eagle nesting.

9. Conclusion:	May Affect	Will Not Affect
Black-footed ferret	X	
American peregrine falcon	X	
Bald eagle	X	

10. Recommendation (including action modification):
Accomplish objectives by the year 2005.



United States Department of the Interior

FISH AND WILDLIFE SERVICE

WASHINGTON, D.C. 20240

ADDRESS ONLY THE DIRECTOR
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803.7

In Reply Refer To:
FWS/OES 6-80-162

NOV - 5 1980

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*Make us
a copy + send
orig. to refuge*

Memorandum

To: Regional Director, Region 6 (ARD/FA)

From: *Acting Associate* DirectorSubject: Intra-Service Section 7 Consultation, Management of
Charles M. Russel (CMR) National Wildlife Refuge
Montana (RW 803.7)

This responds to your September 2, 1980, request for Section 7 consultation on the five management alternatives proposed to solve some of the resource problems on CMR, relative to the listed black-footed ferret (Mustela nigripes), the bald eagle (Haliaeetus leucocephalus), and the American peregrine falcon (Falco peregrinus anatum).

On October 29, 1980, we completed an examination of the above action and reviewed the biological information provided by you along with information available in our files. During the course of this consultation, Mike Pramsteller, National Wildlife Federation Raptor Information Center, Arlington, Virginia; Dan James and Jay Sheppard, Office of Endangered Species; Gerald Craig, Rocky Mt. Peregrine Falcon Recovery Team, Leader; Jim Grier, Northern States Bald Eagle Recovery Team, Leader; and Bart O'Gara and Chris Servheen, Wildlife Coop Unit, Missoula, Montana, were contacted.

A review of the project information and information obtained from the experts and other knowledgeable sources on the biology of the listed species indicates that the actions of the proposed management alternatives may result in developing habitat for black-footed ferrets that is at least equal to that which now exists by manipulating grazing patterns to keep prairie dog towns at their present level, except for the no grazing alternative under which there might be some reduction in the level of prairie dog towns. The general tendency of all alternatives (except the no action alternative) to improve habitat for wildlife should provide improved conditions for the bald eagle and especially the peregrine falcon by improving riparian habitats, and thereby increasing the number and variety of avian prey for the latter species.

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ENDANGERED SPECIES

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The reintroduction of black-footed ferrets and the establishment of peregrine falcon eyries, as these animals become available, (under all except the no action alternative) would contribute to the possibility of eventually recovering these species. The no action alternative will at least leave habitat for these two species in its present condition.

Therefore, it is my biological opinion that your action, as proposed, is not likely to jeopardize the continued existence of the black-footed ferret, bald eagle, or peregrine falcon.

To assist you in exercising your authority for the conservation of listed species, the following actions are recommended:

1. Dr. Louis Locke of the National Wildlife Health Laboratory in Madison, Wisconsin, is currently conducting a detailed study of secondary lead poisoning in raptors, prompted by preliminary evidence that raptors may be affected by ingesting lead contaminated waterfowl. Any refuge having an incidence or suspicion of secondary lead poisoning in raptors should immediately contact Dr. Locke at FTS 364-5422 or Commercial 608/264-5422.
2. During waterfowl hunting seasons various means such as signs or posters at hunting access points, in blinds, etc., should be used to warn hunters of the possible occurrence of bald eagles and peregrine falcons in the area and to help them identify these two species.
3. Once attempts are underway to establish peregrine falcon eyries, care should be taken to limit human activities within the vicinity of these sites.

Should this action, as now planned, be modified or altered, or should new species be listed that may be affected, you must reinitiate consultation.



Appendix 1b. The Planning Process

The conclusions reached in regard to wildlife and grazing in the Proposed Action require the understanding of the step-by-step process and rationale used, progressing from the mission statement to monitoring of specific actions taken to reach the objectives. This process is summarized here for clarification.

The mission statement (par. 2, page 4) for CMR is based on that of the National Wildlife Refuge System. The CMR goals, in priority order (page 4), are derived from and expand upon the CMR mission statement. They are more specific in stating the purposes and activities desirable and permitted on CMR. From these goals were derived the even more specific objectives, also in priority order (pages 5 and 6), often quantified and providing desired end points. These end points were sometimes modified following determination of habitat potential and resolution of conflict that came later in the planning process. The wildlife objectives drive the planning process, dominate the other objectives, and may modify or preclude the others if conflicts arise that cannot be resolved in any other way. In the case of the Proposed Action, additional policy constraints (par. 3, page 9) were imposed by Management.

With the above guidelines and constraints, a list of important and indicator wildlife species, both game and nongame, were selected (Appendix 2). The present value of the refuge for these species, and the deficiencies of the habitat for each of these, was determined for the refuge through sampling, using the 1976 Habitat Evaluation Procedure (HEP). Habitat potentials for the selected species were estimated, based upon interpretation of soils information (Appendix 7, pages 166-170), range site and condition survey data (Appendices 8 and 9, pages 171-178), HEP criteria (Appendix 2, pages 137-157), literature review, and information on wildlife population densities and distribution.

From this point, it was possible to envision a desired, general habitat model for the refuge as a whole that would permit achieving the best mix of wildlife objectives. This required some trade-offs among the selected wildlife species (what is best for one species is not necessarily best for another). These trade-offs were weighted in favor of those species judged to be the more important ones on CMR. It quickly became clear that maximum diversity and interspersions of habitat would best accomplish a desirable mix of wildlife when viewed for the refuge as a whole. The habitat model included such concepts as variety of habitat types, edge, interspersions of habitat types, maximum amounts of deciduous shrubs, and varying degrees of utilization of forage.

The next step was to analyze possible ways to achieve the conditions envisioned in the desired habitat model and select those that would do the job. Wildlife foraging, livestock grazing, fire, planting, and mechanical manipulation were considered. In the case of the Proposed Action, freedom to choose methods of achieving the habitat model on the ground was constrained by policies (par. 3, page 9). It was concluded for the Proposed Action that light, seasonal livestock grazing at various times of the year and in various places, along with limited use of fire and planting, would accomplish the objectives within policy constraints.

Appendix 1b. (Cont'd.)

During the same time as the above was being done, a range site and condition survey (Appendices 8 and 9) was made in accordance with Soil Conservation Service procedures which resulted in a standard computation of existing AUMs of forage. The AUMs derived from this method were then subjected to a slope/water matrix (Appendix 15, pages 216-221) to more realistically determine availability of forage to livestock.

When the results of this process, along with small, additional soil factor reductions, were analyzed, it became clear that in most cases the resultant AUMs represented light stocking rates, so further adjustments for stocking would generally not be needed to conform to the habitat model. However, a few additional reductions were made to meet specific wildlife needs in key areas.

The next step, upon receiving the Record of Decision, will be to develop Habitat Management Plans, largely based upon grazing allotment boundaries, to achieve wildlife objectives. These plans will be in conformity with the guidance provided in the EIS, but, unlike the EIS, will be site specific and designed to meet the particular wildlife needs within the area of concern. They will be developed in cooperation with involved landowners, BLM, and other affected parties.

The final step will be to monitor the progress of the Habitat Management Plans towards achieving refuge objectives, and making adjustments as they are needed.

Appendix 2. Habitat evaluation procedures and values on Charles M. Russell National Wildlife Refuge, Montana.

INTRODUCTION

The habitat evaluation procedures (HEP) used in this document originated with FWS to gather information for planning and decision making. Data on habitat needs of various indicator species were collected from scientific publications, documented research findings, field notes, and professional judgments. Through this process of documentation, the best information available on species habitat needs was compiled. This data base is subject to change as new information becomes available, but existing knowledge provides a sound scientific basis from which to proceed.

The system of analysis evaluates criteria on a scale of 1 to 10, with 10 being an ideal condition. Because habitat evaluation criteria are derived from locations with varying climates and soils, the criteria value of 10 may not be possible to obtain on CMR. Average annual precipitation on CMR is only 10-13 inches, and soils are largely Bearpaw shales, which have low production potential. It is important to keep these limitations in mind when considering the evaluation criteria.

METHODOLOGY

The refuge was flown in June and July 1977 to obtain color infrared (CIR) photos at a scale of 1:24000. These photos were interpreted to determine vegetative types (Appendix Table 2-A). One criterion for habitat evaluation is that information about a species has to be available. The literature was not definitive for all vegetative breakdowns, and certain types were combined into the following categories for evaluation: sagebrush-greasewood-grasslands, ponderosa pine-juniper, and grassland-deciduous shrub. Other vegetative types listed were deciduous river bottoms and cultivated lands. Ponds were considered portions of major vegetative types in which they occurred.

Representative species were selected for these five vegetative types based on the following factors: 1) information available on habitat requirements; 2) a good indicator of habitat quality and/or represents a group of other species; and 3) economically important.

Individual sample sites were selected from a table of random numbers. Two digit numbers were selected corresponding to ranges and townships. All habitat types within the selected section were sampled. Additional samples were taken as time permitted to increase sampling reliability. At each sample site the following information was listed: 1) unit numbers, 2) general vegetative type, 3) date, 4) legal description, 5) subtype, and 6) evaluator's name. Each habitat component was rated on a scale of 1-10 (10 being the best and 1 the worst). Criteria with interval values of 1, 4, 7 and 10 are described in Appendix Tables 2-B through 2-G for the seventeen species sampled.

Appendix 2. (Cont'd.)

Assignment of values 1-10 for individual criteria was based on a combination of observations and actual measurements. Periodic measurements were taken to verify observations, thus maintaining confidence in evaluation. Then two overall values were listed. The first was a biological judgment from the evaluating team and the second was the numerical average of the listed criteria. If differences of more than 2.5 units existed between the two overall values, reasons for this were documented on the field sheets. The two values were generally comparable. Where discrepancies occurred, ratings were modified based on both the actual rating and the biologist's comments. The total number of sample values was averaged for each species by individual criteria and overall value for respective vegetative types. For example, in the sage-greasewood-grassland, all mule deer values for condition of browse were summed and divided by the number of samples to get a value of 4.9 (Appendix Table 2-C). In the same manner all overall mule deer values in this type were summed and divided by the number of samples to get a value of 4.7.

The terms poor, fair, good, and excellent are referred to through the narrative in relation to HEP criteria. The four terms indicate the following range of HEP values: poor, 1.0-2.5; fair, 2.6-5.0; good, 5.1-7.5; and excellent, 7.6-10.0.

These terms could be applied to individual criteria or overall values. If a species was evaluated in more than one vegetative type, a weighted average was derived based on the percentage of the respective habitat type in which the species was found. For example, in the ponderosa pine-juniper type, the overall value for sharp-tailed grouse was 4.5, and in the grassland deciduous shrub type it was 5.6. The ponderosa pine-juniper type occupies approximately 35 percent of the refuge, while the grassland-deciduous shrub type occupies about 2 percent of the area. Since the ponderosa pine-juniper type covers about 17 times more area, the value used for sharp-tailed grouse was derived as follows:

$$\begin{aligned}\text{Sharp-tailed grouse value} &= \frac{(4.5 \times 17) + (5.6 \times 1)}{18} \\ &= 4.56 \\ &= 4.6 \\ &= \text{fair}\end{aligned}$$

Appendix 2. (Cont'd.)

Appendix Table 2a. List of vegetative types on Charles M. Russell National Wildlife Refuge, Montana.

-
1. Big sagebrush-grassland
 2. A. Silver sagebrush bottomlands
B. Silver sagebrush - sandy upland sites
 3. Ponderosa pine
 4. Douglas fir
 5. Juniper
 6. Deciduous river bottoms (includes ash coulees)
 7. Grassland
 8. A. Tall shrubs - buffaloberry
B. Shorter shrubs - rose and snowberry
 9. Halophytic shrubs
A. Greasewood bottomlands
B. Greasewood-grasslands
C. Shadscale
 10. Cultivated lands
A. Hayland
B. Dryland
 11. Barren areas
-

Appendix 2. (Cont'd.)

Appendix Table 2b. Sagebrush-grassland vegetative type on Charles M. Russell National Wildlife Refuge, Montana.

Sage grouse habitat criteria and rating values

- 10- Interspersion of grass and sage with areas of dense big sage (20-39 percent canopy cover) for use by adults throughout the year (Wallestad 1971, Eng and Schladweiler 1972). Areas of moderate big sage (10-15 percent) for use by broods (Wallestad 1971 and Klebenow 1969). Sage 10-24 inches in height for use throughout the year (Dalke et al. 1963, Martin 1970, Wallestad 1971). Ground cover has 10-15 percent canopy cover for forbs in spring and summer (professional judgment). Water within one mile (professional judgment and inference by Patterson 1952).
- 7- Interspersion of dense and moderate big sage for adults and broods as above. Sagebrush is 6-16 inches high. Forbs comprise less than 10 percent of ground cover in spring and summer. Water 1-1.5 miles away.
- 4- No interspersion of dense big sage and moderate big sage. Sage less than 12 inches in height. Forbs comprise less than 5 percent of the ground cover in summer. Alfalfa fields available within the area (professional judgment). Water 2-3 miles.
- 1- Big sage brush very scattered and less than 10 inches tall. Forbs almost nonexistent. Alfalfa fields heavily used. Water greater than 3 miles away.

Golden eagle habitat criteria and rating values

- 10- Large tracts (1000 acres or larger) of sage-grassland for hunting (McGahan 1968). Cliffs and/or rock outcrops for nesting (Snow 1973, Boecker and Ray 1971). Perch sites available in the form of snags and/or rock outcrops (Jackman and Scott 1975). Sage-grassland with a mixture of sage and grass species that provide cover for rodent populations (professional judgment). No human disturbance within 1 mile (Snow 1973, Fish and Wildlife Service 1976, Boecker and Ray 1971).
- 7- Tracts of sage-grassland 500-1000 acres in size. Rock outcrops are more limited, but some large cottonwoods occur for nesting. Sage-grassland lacks good mixture of sage and grasses resulting in smaller rodent populations. Human disturbance within 1/2 mile of nest.

Appendix Table 2b. (Cont'd.)

- 4- Small tracts of sage-grassland (250-500 acres) located adjacent to ponderosa pine forest. Sage-grassland lacks rock ledges for nesting and perching. Ponderosa pine provides some nest sites. Sage-grassland has vegetation less than 8 inches tall resulting in poor cover for rodents. Human disturbance within 1/4 mile.
- 1- Sage-grassland is less than 250 acres in size. No nest sites available in the sage-grassland. Sage-grassland vegetation is less than 5 inches high. Continual human disturbance occurs.

Pronghorn habitat criteria and rating values

- 10- Sage-grassland with a mixture of big sage, silver sage, snowberry, rose, and rabbitbrush (Couey 1946). Succulent forbs available in spring and summer (Hoover et al. 1959). Silver sage abundant in coulee bottoms and adjacent benches for feeding in winter (D. Pyrah personal communication). Sagebrush canopy cover of 10-24 percent for use throughout the year, and 20 percent or greater for fawning (Bayless 1969, D. Pyrah personal communication). Rolling terrain marked by depressions, ridges, flats, benches, and some breaks (Rouse 1959, Hoover et al. 1959). Sagebrush 1-1.5 feet tall (Einarsen 1948, and Severson 1966).
- 7- Sage-grassland with 2-3 species of shrubs as listed above. Forbs available in spring. Silver sage less abundant than above. Sage canopy cover is a maximum of 15 percent for all uses. Sage less than 1 foot tall. Terrain is gently rolling but without depressions and breaks.
- 4- Sage-grassland of mostly big sage. Forbs available in wet years. Alfalfa fields used in summer (Cole 1956). Silver sage very restricted for winter use. Sagebrush canopy cover is 10 percent or less for all seasons of use. 1.5-2 feet tall. Terrain quite flat; lacking little if any topographic relief.
- 1- Rank growth of sagebrush over three feet in height or sage extremely sparse. Terrain extensively flat.

Mule deer habitat criteria and rating values

- 10- Big sage, rubber, and green rabbitbrush abundant for winter use (Mackie 1970). Species are in good-excellent condition with little or no hedging (Mackie 1970). Forbs, such as wild onion, biscuitroot, and especially yellow sweet clover available

Appendix Table 2b. (Cont'd.)

in summer and fall (Mackie 1970). Other shrubs present include skunkbrush, rose, snowberry, and creeping juniper (may include some Rocky Mountain juniper) (Mackie 1970, Allen 1968). Topographic relief in the form of cuts, ravines, and/or juniper patches for hiding cover (professional judgment). Land is deeply dissected (professional judgment).

- 7- Big sage and rabbitbrushes abundant for winter use. Fair-good condition with some hedging. Same forbs present, but yellow sweet clover is restricted for use. Skunkbrush and juniper present. Topographic relief is less pronounced. No deep dissection of the land. Less juniper for hiding cover.
- 4- Only big sage present for winter use. It is in fair-good condition with moderate hedging. Few forbs present. Little sweet clover. Scattered skunkbrush. Rolling hills. No deep dissected land. Sparse juniper cover.
- 1- Scattered sage in poor condition and badly hedged. Very few forbs. No sweet clover. Lack other palatable browse species. Land is flat to gently rolling. No rugged escape cover.

1 = poor, 4 = fair, 7 = good and 10 = excellent

Appendix 2. (Cont'd.)

Appendix Table 2c. Ponderosa pine-juniper vegetative type on Charles M. Russell National Wildlife Refuge, Montana.

Red-tailed hawk habitat criteria and rating values

- 10- Ponderosa pine forest that is open (canopy cover less than 30 percent) (Bent 1937, Jackman and Scott 1975, modified by professional judgment) and adjacent to areas of sage-grassland. Trees 20-30 feet tall and 8-10 inches DBH for nesting (Bent 1937, Jackman and Scott 1975, modified by professional judgment). Sage-grasslands has good mixture of sage, grass, and forb species as cover for prey population (professional judgment).
- 7- Ponderosa pine has 30-45 percent canopy closure. Adjacent sage grassland is 300-400 acres in size. Trees 15-20 feet tall, 6-7 inches DBH. Sage-grassland in fair condition as cover for prey population.
- 4- Ponderosa pine forest having 45-60 percent canopy closure. Adjacent to smaller sage-grassland (less than 300 acres). Trees 10-15 feet tall and 4-5 inches DBH. Grassland in good condition, but little or no sagebrush.
- 1- Dense ponderosa pine forest (greater than 60 percent canopy cover). No sage-grassland for hunting.

Elk habitat criteria and rating values

- 10- Long narrow coulees that are highly dissected and contain mesic sites with dense conifer cover at their head (B. Campbell, personal communication). Dense juniper thickets for calving, hunting security, and shade (B. Campbell personal communication). Topographic relief in the form of cuts, ravines, and/or trees for shade and hiding cover (B. Campbell personal communication). Abundant mesic coulees for feeding summer and fall (B. Campbell personal communication). Small to moderately extensive ridgetops dominated by big sage-western wheatgrass in good-excellent condition for winter-spring use (Mackie 1970). Water source every section (B. Campbell personal communication).
- 7- Fewer long narrow coulees as above. Less dense juniper thickets. Rolling topography. Some mesic sites and/or yellow sweet clover patches for feeding summer and fall. Ridgetops as above in fair-good condition for winter-spring use. Water source every two sections.

Appendix Table 2c. (Cont'd.)

- 4- No coulees as above. No juniper thickets. Rolling topography. Few mesic coulees and/or clover patches. Winter-spring areas in poor-fair conditions. Water sparsely distributed.
- 1- Lack of topographic relief and vegetative cover. Lack of palatable grasses and forbs. Lack of water.

Sharp-tailed grouse habitat criteria and rating values

- 10- North slopes with 10-12 inches of effective residual grass cover for nesting (Christenson 1971, Sisson 1976). Shrub crown cover of 30-45 percent in coulees (Grange 1948, Ammann 1957). Shrub coulees with serviceberry, chokecherry, snowberry, wildrose, and buffaloberry (Sisson 1976, Nielsen 1978). Shrubs having all terminal leaders alive (professional judgment). Grasses and forbs abundant and in good condition between forest area (Edminster 1954, and professional judgment).
- 7- North slopes with 8-10 inches effective residual grass cover. Shrub crown cover 45-60 percent in coulees. Same shrub species. Shrubs with 75 percent of terminal leaders alive. More grasses and less forbs between forest areas.
- 4- North slopes have effective residual grass cover of 6-8 inches high. Shrubs in coulees with 20-30 percent crown cover. Some deciduous species present but mostly juniper. Deciduous shrubs somewhat decadent (50 percent of terminal leaders alive). Understory sparsely vegetated.
- 1- Residual grass cover less than 6 inches tall. Only juniper present and in good condition. Grading into sage-grassland.

Porcupine habitat criteria and rating values

- 10- Ponderosa pine forest with a semi-open canopy (30-60 percent) (Costello 1966 and professional judgment). Trees 7 inches or greater DBH and 15-20 feet high (Marshall et al. 1962). Herbaceous material composes about 50 percent of the ground cover (Costello 1966 and professional judgment). Some heavy brush, rock piles, or other suitable dense cover is available within the habitat for denning (Costello 1966).
- 7- Ponderosa pine forest with less than 30 percent canopy cover. Herbaceous material composes 25-50 percent of the ground cover. Clumps of dense brush and/or rock outcrops are quite scattered.

Appendix Table 2c. (Cont'd.)

- 4- Ponderosa pine forest with dense canopy cover (greater than 60 percent). Trees more than 30 feet tall. Less than 25 percent herbaceous ground cover. Single scattered bushes and few rock outcrops.
- 1- Dense ponderosa pine forest ground cover is primarily pine needles. No brush or rock outcrops.

Mountain bluebird habitat criteria and rating values

- 10- Ponderosa pine forest that has less than 30 percent canopy cover (Jackman and Scott 1975) and two or more snags/acre with cavities for nesting (Balda 1975). Ground cover is less than 2 feet high (Miller 1970).
- 7- Ponderosa pine forest with as much as 60 percent canopy cover. Still has several cavities for nesting. Ground cover is up to 3 feet high.
- (-6- Juniper present but grass less than 2 feet tall.)
- 4- Ponderosa pine forest with as much as 75 percent canopy closure. Few nesting cavities occur. Ground cover is over 3 feet high.
- 1- Closed ponderosa pine forest. Greater than 75 percent canopy cover. No nesting cavities. Heavy shrub understory.

Bobcat habitat criteria and rating values

- 10- Forest canopy closure 45-60 percent (professional judgment). Moderate brush understory (difficult to see through but can be walked through) (Sampson 1967). Scattered rock outcrops and ledges (Rollings 1945). This forest may also be adjacent to coulees filled with juniper and sagebrush (Young 1958).
- 7- Canopy closure 30-45 percent and forest understory is becoming dense (difficult to walk through). Dense clumps of scattered juniper may also occur.
- 4- Open forest, less than 30 percent canopy cover. Light shrub understory. Few rock outcrops. Coulees have little juniper or sage.
- 1- Scattered trees. Herbaceous understory. No rock outcrops.

Appendix Table 2c. (Cont'd.)

Mule deer habitat criteria and rating values

- 10- Interspersion of ponderosa pine with patches of sage-grassland on smaller ridgetops, and along margins of more extensive ridges with sage abundant in these areas for winter use (Mackie 1970). Forbs (especially yellow sweet clover) and skunkbrush available in summer and fall (Mackie 1970). Other shrubs as snowberry, rose, and chokecherry also available in summer and fall (Mackie 1970, Allen 1968). Shrubs, including big sage and rubber rabbitbrush, available in winter, in good condition with no hedging (Mackie 1970).

 - 7- Interspersion of ponderosa pine with patches of sage-grassland along major ridgetops and sage abundant. Yellow sweet clover available in summer. Skunkbrush very sparse. Big sage and rubber rabbitbrush available in winter in fair condition with some hedging.

 - 4- Interspersion of ponderosa pine with some patches of sage-grassland along major ridgetops and sage scattered. Yellow sweet clover very scarce as is skunkbrush for summer and fall use. Big sage available in winter in poor condition with moderate hedging.

 - 1- Ponderosa pine on moderate slopes with no sage-grassland interspersed. Few palatable forbs or shrubs as above. Those present are in very poor condition and heavily hedged.
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1 = poor, 4 = fair, 7 = good and 10 = excellent

Appendix 2. (Cont'd.)

Appendix Table 2d. Grassland-deciduous shrub vegetative type on the Charles M. Russell National Wildlife Refuge, Montana.

Sharp-tailed grouse habitat criteria and rating values

- 10- North slopes with 10-12 inches of effective residual grass cover for nesting (Christenson 1971, Sisson 1976). Shrub coulees of 30-45 percent crown cover (Grange 1948, Ammann 1957) and 6-12 feet high for brooding and roosting (Sisson 1976, Nielsen 1978). Shrubs are mostly serviceberry, choke-cherry, snowberry, wild rose, and buffaloberry (professional judgment). Grasses and forbs abundant and in good condition between shrub areas (Edminster 1954 and professional judgment).
- 7- North slopes with 8-10 inches of effective residual grass cover. Shrub coulees of 45-60 percent crown cover and 6-8 feet high. Same shrub species plus juniper. Deciduous shrubs with 75 percent of terminal leaders alive. More grasses and less forbs, still in good condition.
- 4- North slopes with 6-8 inches of effective residual grass cover. Coulees with more scattered shrubs (20-30 percent crown cover). Shrubs 4-6 feet tall. Two-three shrub species present that have 25-50 percent of terminal leaders alive. Understory sparsely vegetated.
- 1- North slopes with 3-4 inches of effective residual grass cover. Shrubs very scattered in coulees (less than 10 percent crown cover). One or two species less than 2 feet tall. Shrubs decadent with less than 25 percent of leaders alive.

Mourning dove habitat criteria and rating values

- 10- Large grain or weed fields within 1 mile of deciduous shrub area (Edminster 1954, Moore and Pearson 1941). Shrub crown cover 30-60 percent in scattered clumps (professional judgment). Shrub areas with 4 miles of water (McClure 1943).
- 7- Only road edges available for feeding. These areas are within 1 mile of shrub areas. Shrub crown cover 10-30 percent in scattered clumps. These areas are up to 5 miles from water.
- 4- Only grassland available as seed source. These feeding areas are more than 2 miles from shrub areas. Shrub crown cover is less than 10 percent and these areas are up to 6½ miles from water.

Appendix Table 2d. (Cont'd.)

- 1- No seed source. Shrub crown cover less than 5 percent in coulees. Water is 8+ miles away.

Mule deer habitat criteria and rating values

- 10- Shrubby areas with shrubs 5-6 feet high in patches of 800-1600 feet in length for hiding and fawning. (Thomas et al. 1976). Shrubs for winter food source include juniper, snowberry, rose, chokecherry, and sagebrush (Kufeld et al. 1973, Mackie 1970). These plants have 75 percent or more of current year's growth retained through the winter (professional judgment). Forbs abundant (15 percent of the ground cover) (K. Hamlin personal communication, Kufeld et al. 1973). Topographic relief in the form of cuts, ravines, and rolling hills (professional judgment).
- 7- Shrubby areas with shrubs 2-6 feet high in patches of 200-800 feet in length for hiding and fawning. Shrubs for winter food are the same as above. These plants retain 50-75 percent of current year's growth through the winter. Forbs 10 percent of the ground cover. Topographic relief is less pronounced, no deep cuts or ravines.
- 4- Shrubby areas less than 2 feet in height are quite scattered and smaller than 200 feet in length. Shrubs for winter food include juniper, rose and sagebrush. These species are not abundant and retain 25-50 percent of current year's growth through the winter. Forbs 5 percent of the ground cover. Only gently rolling hills for topographic relief.
- 1- No shrub patches large enough to provide hiding cover. Only sagebrush and juniper available for winter food. Few forbs occur. Flat to rolling sage-grasslands.

1 = poor, 4 = fair, 7 = good and 10 = excellent

Appendix 2. (Cont'd.)

Appendix Table 2e. Deciduous river bottom vegetative type on the Charles M. Russell National Wildlife Refuge, Montana.

Raccoon habitat criteria and rating values

- 10- Deciduous tree stand of large, mature trees within 500 feet of water (professional judgment, Stuewer 1943, Giles 1942). Average height of trees over 55 feet (Stuewer 1943). Average DBH of trees, 25 inches (Stuewer 1943). Denning trees, or their potential, available at rate of 4+ per 15-20 acres (Stuewer 1943). Trees within 0.5 mile of cultivated cropland, if available (Caras 1967).
- 7- Deciduous trees stand with 20-30 percent large mature trees. Stand within 800 feet of water. Average height of trees 38 feet. Average DBH of trees 18 inches. Denning trees, or their potential, available at rate of 2 per 15-20 acres. Trees 1.25 miles from cultivated cropland, if available.
- 4- Young deciduous tree stand. Stand within 1200 feet of water. Average height of trees 20 feet. Average DBH of trees 10 inches. No denning trees available but ground-den sites available.
- 1- No trees or just saplings. Over 1,600 feet from water. No den sites.

White-tailed deer habitat criteria and rating values

- 10- River bottom with overstory of continuous large mature cottonwoods (Mussehl and Howell (ed.) 1971). Shrub understory that is dense and difficult to walk through (professional judgment). Palatable browse species like snowberry, choke-cherry, cottonwood, green rabbitbrush, serviceberry, and red osier dogwood present and less than 6 feet tall (Allen 1968). Plants retain 75 percent or more of current year's growth through the winter (Young and Payne 1948). Openings scattered through river bottom (McCaffery and Creed 1969). Coulees of deciduous shrubs within sight of the river bottom (professional judgment). Include bottoms numbered 16-20 from the mouth of the reservoir (K. Hamlin personal communication and professional judgment).
- 7- River bottom with overstory of large mature cottonwoods that are not continuous. Shrub understory that is moderately dense and can be walked through. Three-four palatable browse species (as listed above) within 6 feet of ground level. Plants retain 50-75 percent of current year's growth through the winter.

Appendix Table 2e. (Cont'd.)

Occasional openings throughout the river bottom. Include bottoms numbered 11-15 from mouth of the reservoir.

- 4- River bottom with cottonwood overstory occurring as clumps of scattered trees. Light shrub understory, one-two palatable browse species as listed above within 6 feet of ground level. Plants retain 25-50 percent of current year's growth through the winter. Agricultural fields adjacent to river bottom. Include bottoms 6-10 from mouth of the reservoir.
- 1- River bottom with no overstory, and only very scattered shrubs. Large proportion of annuals compose ground cover. Include bottoms 1-5 from mouth of the reservoir.

Eastern kingbird habitat criteria and rating values

- 10- Mature deciduous forest contiguous to river system for perch sites (Manolis 1973). Understory of trees and shrubs 6-10 feet high for nesting (Graber et al. 1974, Davis 1955). These areas are surrounded by open country used for feeding (Graber et al. 1974).
 - 7- Shrubs and young trees contiguous to a stream bank. Open country surrounds water system.
 - 4- Scattered mature deciduous trees contiguous to river system. Lack of shrub-small tree understory. Open country is not nearby.
 - 1- Shrubby coulees not within site of river bottom. These coulees lack water. Open country is not nearby.
-

Appendix 2. (Cont'd.)

Appendix Table 2f. Cultivated lands vegetative type on the Charles M. Russell National Wildlife Refuge, Montana.

American kestrel habitat criteria and rating values

- 10- Agricultural fields adjacent to cottonwood river bottoms (Eyre and Paul 1973). Cottonwoods should be mature with cavities for nesting (Olendorff 1973). Suitable perch sites available. This could include fence posts, power lines, rocks, or boulders (Roest 1957).
- 7- Agricultural fields adjacent to coulees with ash or cottonwood trees. Trees are mature but not of cavity-bearing size. Perch sites are also more restricted.
- 4- Agricultural fields on upland sites adjacent to grasslands and/or ponderosa pine trees without suitable nest sites. Few suitable perch sites occur.
- 1- Extensive, rolling grassland. No trees or rock outcrops for nesting or perching.

Mourning dove habitat criteria and rating values

- 10- Cultivated fields within 1 mile of coulees containing deciduous shrubs and/or river bottoms (Edminster 1954, Moore and Pearson 1941). Shrubby coulees and river bottom forest should be semi-open (30-60 percent canopy cover) (professional judgment). Distance to water is 4 miles or less (McClure 1943).
 - 7- Cultivated fields within 1 mile of sage-grassland or deciduous shrub coulees. Shrub crown cover is 10-30 percent. Water is up to 5 miles away.
 - 4- Cultivated fields more than 2 miles from sage-grassland or deciduous shrub coulees. Shrub coulees are quite scattered, and shrub crown cover is less than 10 percent. Water is up to 6½ miles away.
 - 1- No cultivated fields. Only very scattered shrubs or trees. Water is 8 miles or more away.
-

1 = poor, 4 = fair, 7 = good and 10 = excellent

Appendix 2. (Cont'd.)

Appendix Table 2g. Ponds (evaluated in whatever vegetative type it occurred in) on the Charles M. Russell National Wildlife Refuge, Montana.

Muskrat habitat criteria and rating values

- 10- Water level stable throughout the year (Errington 1948, 1963). Water gradually increasing to a maximum depth of 4 feet (Sather 1958, Errington 1948). Emergent vegetation (particularly cattail and bulrush) growing over 1/2 of surface area in a scattered pattern (Errington 1963). Shoreline beyond emergent vegetation completely stable and vegetation 12 inches high (Errington 1963, inference and professional judgment).
- 7- Water level fluctuations annual and of one foot or less. Water depth gradually increasing to a maximum of three feet. Emergent vegetation growing on half of the area of just along shoreline. Shoreline stable and in good condition but vegetation short (6-12 inches high).
- 4- Water level fluctuations frequent throughout the year and of more than one foot. Water depth 1-2 feet. Emergent vegetation covers 25 percent or less of the surface. Shoreline damaged and/or vegetation very short (less than 6 inches high).
- 1- Water level fluctuation extreme (over 5 feet), resulting in dry and flood conditions which either exposes or inundates lodges and dens or water depth of pond less than 1 foot. No emergent vegetation. Shoreline only bare ground with no tation.

General waterfowl habitat criteria and rating values

- 10- Pond is at least 5 acres (526 feet in diameter) at low water in late summer (Crissey 1968). Submerged aquatic vegetation covers entire bottom of pond (professional judgment). Emergent vegetation (bulrush and cattail) cover 1/2 surface area of pond in a scattered pattern (professional judgment). Herbaceous upland vegetation, including brush if present, within 150 feet of the pond is 1.5+ feet tall and 75+ percent ground cover (Bent 1923, Bennet 1938, Burgess et al. 1965, Drewien and Springer 1969). Pond contains at least one island for goose nesting (Geis 1956, Sherwood 1968, Pakulak 1969).
- 7- Pond is 3.5 acres (440 feet in diameter) at low water in late summer. Submerged aquatic vegetation covers 75 percent of bottom. Emergent vegetation covers 1/2 surface area of pond in mostly a block or band. Herbaceous/brushy upland vegetation is 1 foot tall and has 60 percent ground cover. Only muskrat houses available for goose nesting.

Appendix Table 2g. (Cont'd)

- 4- Pond is 2 acres (332 feet in diameter) at low water in late summer. Submerged aquatic vegetation covers 25 percent of bottom. Emergent vegetation is only around 1/2 of the pond edge. Herbaceous/brush upland vegetation is 6-12 inches tall and has 30 percent ground cover. Peninsula of land for goose nesting.
- 1- Pond dries up every summer. Little or no submerged aquatic vegetation present. No emergent vegetation present. Upland vegetation is mostly herbaceous of less than 3 inches height and the shoreline area is bare ground. Only shoreline available for goose nesting.
-

1 = poor, 4 = fair, 7 = good and 10 = excellent

Appendix 2. (Cont'd.)

Appendix Table 2h. Wildlife habitat ratings by major habitat type on Charles M. Russell National Wildlife Refuge, Montana.

Vegetative type, wildlife species and criteria	Individual criteria rating	Overall rating
Sage-greasewood-grassland		
Sage grouse		4.2
canopy cover of sage	4.3	
sage height	6.4	
canopy cover of forbs	5.0	
distance to water	8.7	
alfalfa fields	3.8	
Golden eagle		5.5
tract size	9.0	
suitable perch/nest sites	5.3	
cover for rodent population	5.3	
human disturbance	7.7	
Pronghorn		5.1
mixture of shrubs & grass	4.7	
forb availability	5.6	
silver sage availability	4.6	
sage canopy cover	5.1	
sage height	7.5	
topography	7.2	
Mule deer		4.7
winter browse	4.9	
condition of browse	5.5	
forb-summer & fall	5.7	
other shrubs	4.9	
topography relief	6.3	
Ponderosa pine-juniper		
Red-tailed hawk		6.0
forest canopy cover	8.7	
adjacent sage/grassland	9.0	
tree size-nesting/perching	7.7	
cover for prey	4.9	
Elk		6.0
coulee availability	6.5	
juniper cover	6.7	
topography	7.8	
feeding sites	5.5	
water availability	8.3	

Appendix Table 2h. (Cont'd.)

Sharp-tailed grouse		4.5
north slope residual cover	3.8	
shrub crown cover	4.1	
shrubby coulees	3.9	
understory quality	5.2	
Porcupine		6.2
forest canopy cover	8.6	
tree size	8.3	
ground cover	5.7	
denning sites	6.2	
Mountain bluebird		6.0
forest canopy cover	8.8	
nesting cavities	5.3	
ground cover height	7.5	
Bobcat		5.0
forest canopy cover	5.6	
understory density	4.9	
rock outcrops and ledges	2.5	
coulee cover	4.9	
Mule deer		5.5
interspersation-pine/sage/grass	5.5	
summer/fall food-forbs and shrubs	5.1	
winter food-shrubs	5.5	
Grassland-deciduous shrub		
Sharp-tailed grouse		5.6
height of shrubs	6.0	
north slope residual cover	4.9	
shrub crown cover	5.0	
shrubby coulees species	7.0	
grass/forbs	7.6	
Mourning dove		5.4
seed source availability	5.2	
shrub crown cover	6.2	
distance to water	9.9	
Mule deer		6.1
shrub height	8.6	
shrub patch size	4.4	
winter browse species	6.8	
forb abundance	5.6	
topography	6.8	

Appendix Table 2h. (Cont'd.)

Riparian, deciduous riverbottom-Missouri River			
Raccoon			7.2
distance of trees to water	8.3		
height and DBH of trees	7.6		
denning tree availability	7.4		
distance to cropland	6.9		
White-tailed deer			6.2
overstory density	7.8		
understory density	6.2		
browse availability	5.4		
availability of openings	7.0		
Eastern kingbird			8.1
tree size and density	8.9		
understory	6.9		
availability of open country	9.6		
Riparian, deciduous, riverbottom-other streams			
Raccoon			6.6
distance of trees to water	7.2		
height and DBH of trees	7.2		
denning tree availability	7.4		
distance to cropland	7.8		
White-tailed deer			4.2
overstory density	5.5		
understory density	4.0		
browse availability	3.4		
availability of openings	7.5		
Eastern kingbird			6.5
tree size and density	7.0		
understory	5.6		
availability of open country	10.0		
Cultivated lands			
American kestrel			6.5
adjacent land type	6.8		
nesting cavity availability	6.0		
perch availability	7.8		

Appendix Table 2h. (Cont'd.)

Mourning dove		7.3
distance to interspersed land	7.9	
canopy cover-forest or shrub	6.6	
distance to water	10.0	
Ponds		
Muskrat		4.0
water stability	6.8	
water depth	7.5	
emergent vegetation abundance	3.2	
shoreline stability and vegetation	4.6	
Waterfowl		3.4
pond size	3.9	
submerged aquatic vegetation	3.2	
emergent vegetation	3.0	
upland vegetation	3.8	
goose nesting sites	3.8	

0.0-2.5 = poor, 2.6-5.0 = fair, 5.1-7.5 = good and 7.6-10.0 = excellent

Appendix 3. Memorandum of agreement between District Engineer, Omaha District, Corps of Engineers, and Area Manager, Billings Area Office, Fish and Wildlife Service, for the Charles M. Russell National Wildlife Refuge and Fort Peck Lake Project, Montana.

The U.S. Fish and Wildlife Service and the U.S. Army Corps of Engineers recognize the National, Regional, and Local importance of the natural resources contained within the Charles M. Russell National Wildlife Refuge and the Fort Peck Lake Project, Montana, hereinafter called the Area. Both agencies also recognize the public interest can be best served through coordinated planning and management efforts to maximize opportunities for conserving these resources and minimize the adverse impacts associated with the management actions of the respective agencies.

The parties to this Memorandum of Agreement agree to coordinate, cooperate, and, when appropriate, jointly develop resource management plans and other actions.

The Omaha District Engineer of the Corps of Engineers and the Billings Area Manager*of the Fish and Wildlife Service will develop mechanisms necessary to insure that implementation of all actions are in consonance with agreements contained herein.

In each phase of planning and future management and in the formulation of proposals for the preservation, conservation, management, and/or development of the natural resources within the Area, both agencies will consult and identify potential actions which could have adverse or beneficial impacts on the executive and legislative mandated responsibilities of each agency. Both agencies agree to coordinate efforts at the field operating level to resolve these potential areas of conflict and to modify the potential actions to the extent permitted by each agency's policies and regulations, and applicable laws.

It is further recognized by both agencies that the natural resources in the Area should be made available for public enjoyment and appropriate recreation provided that public use and associated developments do not adversely affect fish and wildlife and their habitats and will be operated in a generally natural setting compatible with the Missouri River Breaks Ecosystem.

Date 17 July 1979

(signed) V. D. Stipo
V. D. Stipo
Col., Corps of Engineers
Omaha District Engineer

Date 11 July 1979

(signed) Wally Steucke
Wally Steucke
Area Manager *
Billings Area Office
U. S. Fish and Wildlife Service

* The Billings Area Manager position no longer exists. Functions of that office are now under the Regional Office of U.S. Fish and Wildlife Service in Denver, Colorado.

Appendix 4. Executive Order 7509 establishing the Fort Peck Game Range, Montana.

By virtue of and pursuant to the authority vested in me as President of the United States and by the act of June 25, 1910, ch. 421, 36 Stat. 847, as amended by the act of August 24, 1912, ch. 369, 37 Stat. 497, and subject to the conditions therein expressed and to all valid existing rights, it is ordered that the following-described lands, insofar as title thereto is in the United States, be, and they are hereby, withdrawn from settlement, location, sale, or entry and reserved and set apart for the conservation and development of natural wildlife resources and for the protection and improvement of public grazing lands and natural forage resources: Provided, That nothing herein contained shall restrict prospecting, locating, developing, mining, entering, leasing, or patenting the mineral resources of the lands under the applicable laws: Provided further, that any lands within the described area which are otherwise withdrawn or reserved will be affected hereby only insofar as may be consistent with the uses and purposes for which such prior withdrawal or reservation was made: And provided further, That upon the termination of any private right to, or appropriation of, any public lands within the exterior limits of the area included in this order, or upon the revocation of prior withdrawals unless expressly otherwise provided in the order of revocation, the lands involved shall become part of this preserve:

(Legal Description available in FWS office Lewistown, Montana.)

This range or preserve, insofar as it relates to conservation and development of wildlife, shall be under the joint jurisdiction of the Secretaries of the Interior and Agriculture, and they shall have power jointly to make such rules and regulations for its protection, administration, regulation, and improvement, and for the removal and disposition of surplus game animals, as they may deem necessary to accomplish its purposes, and the range or preserve, being within grazing districts duly established pursuant to the provisions of the act of June 28, 1934, ch. 865, 48 Stat. 1269, as amended by the act of June 26, 1936, Public No. 827, 74th Congress, shall be under the exclusive jurisdiction of the Secretary of the Interior, so far as it relates to the public grazing lands and natural forage resources thereof: Provided, however, That the natural forage resources therein shall be first utilized for the purpose of sustaining in a healthy condition a maximum of four hundred thousand (400,000) sharp-tailed grouse, and one thousand five hundred (1,500) antelope, the primary species, and such nonpredatory secondary species in such numbers as may be necessary to maintain a balanced wildlife population, but in no case shall the consumption of forage by the combined population of the wildlife species be allowed to increase the burden of the range dedicated to the primary species: Provided further, That all the forage resources within this range or preserve shall be available, except as herein otherwise provided with respect to wildlife, for domestic livestock under rules and regulations promulgated by the

Appendix 4. (Cont'd.)

Secretary of the Interior under the authority of the aforesaid act of June 28, 1934, as amended: And provided further that Land within the exterior limits of the area herein described, acquired, and to be acquired by the United States for the use of the Department of Agriculture for conservation of migratory birds and other wildlife, shall be and remain under the exclusive administration of the Secretary of Agriculture and may be utilized for public grazing purposes only to such extent as may be determined by the Said Secretary to be compatible with the utilization of said lands for the purposes for which they were acquired as aforesaid under regulations prescribed by him.

The reservation made by this order supersedes as to the above-described lands the temporary withdrawal for classification and other purposes made by Executive Order No. 6910 of November 26, 1934, as amended.

This preserve shall be known as the Fort Peck Game Range.

Franklin D. Roosevelt

The White House,
December 11, 1936.

(No. 7509)
(F.R. Doc. 3825-Filed, December 14, 1936; 2:30 p.m.)

Appendix 5. Federal stocking levels in AUMs under each management alternative (livestock) for the Charles M. Russell National Wildlife Refuge, Montana.

Number and name	Total federal AUMs available to livestock and wildlife	No Action (Present Situation)		Proposed Action		Intensive Wildlife Management		Multiple Use		No Grazing	
		1990	2005	1990	2005	1990	2005	1990	2005	1990	2005
1. Antelope Creek	1013	207	207	262	262	69	77	262	350	105	0
		435 nonuse	435 nonuse								
2. E. Slippery Ann	3891	1602	1602	794	794	534	575	1602	1800	801	0
3. Rock Creek	3275	1465	1465	1021	1021	488	519	146	1800	733	0
		199 nonuse	199 nonuse								
4. Nichols Coulee	7794	5181	5181	3637	3637	1862	1999	3900	4500	2591	0
5. Beauchamp Creek	3073	488	488	488	488	267	312	488	550	244	0
6. Fourchette Creek	116	84	84	17	17	0	0	58	58	0	0
7. N. Hawley Creek	112	11	11	11	11	0	0	11	11	0	0
8. Telegraph Creek	1272	757	757	676	676	252	281	757	757	379	0
9. UL Bend	1747	1080	1080	1080	1080	360	385	874	1150	540	0
10. Box Elder #3	58	54	54	47	47	18	30	29	47	0	0
11. Box Elder	247	199	199	102	102	66	66	124	140	100	0
12. Kill Woman	840	336	336	336	336	112	141	280	400	168	0
13. Larb Hills	2680	420	420	420	420	140	193	930	930	210	0
14. Carpenter Creek	3655	2736	2736	1451	1451	912	1243	1828	2000	1368	0
15. Cabin Coulee	2530	2044	2044	1163	1163	681	785	1265	1600	1022	0
16. 7 Point	5197	1919	1919	1633	1633	650	730	2588	2700	960	0
17. Silver Dollar	545	656	656	348	348	210	210	273	350	328	0
18. Skunk Coulee/Mud Creek ^{1/}	2979	1056	1056	1056	1056	352	390	1488	1500	528	0
19. Duck Creek	683	395	395	350	350	145	166	342	360	198	0
		41 nonuse	41 nonuse								
20. Fort Peck Common	634	224	224	186	186	79	108	317	320	112	0
		14 nonuse	14 nonuse								
21. Bear Creek	910	430	430	430	430	143	149	455	480	215	0
22. Bobcat Creek	1193	586	586	631	631	358	493	600	650	165	0
		744 nonuse	744 nonuse								

Appendix 5 . (Cont'd.)

23. Spring Creek	680	163	163	163	437	437	225	303	340	450	82	0
		511 nonuse	511 nonuse	511 nonuse								
24. Sand Arroyo/Rock Creek ^{1/}	467	542	542	542	291	291	181	241	234	400	271	0
		2 nonuse	2 nonuse	2 nonuse								
25. Rock Creek	386	437	437	437	200	249	146	293	193	300	219	0
					49 nonuse							
26. Bug Creek	1054	986	986	986	712	862	332	458	527	900	493	0
		10 nonuse	10 nonuse	10 nonuse	150 nonuse							
27. Nelson Creek	2158	1791	1791	1791	1282	1282	597	625	1079	1300	896	0
28. Pine Coulee	44	28	28	28	0	0	0	0	22	22	0	0
29. Big Dry	1146	912	912	912	758	758	304	468	573	900	456	0
30. Snap Creek	892	1033	1033	1033	634	634	344	356	446	700	517	0
31. Lone Tree	453	276	276	276	353	353	184	208	227	360	138	0
		276 nonuse	276 nonuse	276 nonuse								
32. Coyote Basin	1667	1846	1846	1846	1144	1144	615	784	833	1500	923	0
33. Box Creek	1815	936	936	936	936	936	312	479	908	1000	468	0
34. Norville Creek	505	395	395	395	373	373	132	357	253	400	198	0
35. Spring Draw	499	353	353	353	283	283	118	118	250	353	177	0
36. Sage Creek Point	996	343	343	343	578	578	241	241	500	600	172	0
		380 nonuse	380 nonuse	380 nonuse								
37. Penick Coulee	1014	833	833	833	650	650	278	278	507	700	417	0
38. Gilbert Creek	3752	3676	3676	3676	1605	1605	1225	1507	1876	3000	1838	0
39. Points Pasture	402	668	668	668	279	279	223	223	201	300	334	0
40. Crooked Creek	3089	1932	1932	1932	1523	1523	644	744	1545	1700	966	0
41. Hell Creek	3621	2255	2255	2255	1807	1807	752	928	1810	2000	1128	0
42. Blowfile Butte	642	525	525	525	202	202	175	186	321	400	263	0
43. Snow Creek	2282	1371	1371	1371	1223	1223	459	626	1141	1370	686	0
		6 nonuse	6 nonuse	6 nonuse								
44. Hill Coulee	755	583	583	583	465	465	194	234	378	500	292	0
45. Billy Coulee	6	11	11	11	4	0	0	0	3	6	0	0
46. Billy Creek	627	355	355	355	229	229	118	162	313	355	178	0
47. Slaymaker	73	115	115	115	0	0	0	0	36	45	0	0
		2 nonuse	2 nonuse	2 nonuse								
48. Blackfoot	1418	730	730	730	463	463	243	276	709	730	365	0
49. Herman Ridge	190	80	80	80	80	80	27	36	95	95	0	0

Appendix 5. (Cont'd.)

50. Devils Creek Common	1463	559	68 nonuse	559	68 nonuse	430	530	209	226	500	730	280	0
51. Ghost Coulee	568	249	249	249	68 nonuse	100 nonuse	238	83	109	284	300	125	0
52. Deadman Coulee	407	405	405	405	405	229	229	135	163	203	260	203	0
53. Lost Creek	1280	599	599	599	599	599	599	200	244	640	675	300	0
54. Grass Coulee	1895	1218	1218	1218	1218	867	867	406	542	950	1200	609	0
55. Germaine Coulee	1553	900	900	900	900	650	650	300	346	776	850	450	0
56. 79 Trail	563	142	142	142	142	142	142	47	53	200	200	71	0
57. Deer Coulee	1307	1141	1141	1141	1141	378	378	380	413	650	700	571	0
58. Soda Creek	3298	1888	1888	1888	1888	1011	1011	897	998	1649	1700	944	0
59. Musselshell Trail	1992	804 nonuse	804 nonuse	804 nonuse	804 nonuse	462	462	360	392	986	1081	541	0
60. Hansen Flat	663	1081	1081	1081	1081	284	284	108	128	331	400	163	0
61. E. Indian Butte	3472	325	325	325	325	1180	1180	659	872	1736	1800	989	0
62. W. Indian Butte	1169	1977	1977	1977	1977	428	428	213	305	585	650	774	0
63. Mohrbridge	41	547	547	547	547	92 nonuse	92 nonuse	0	0	20	30	0	0
64. 2 Calf	679	35	35	35	35	26	26	102	102	298	305	153	0
65. Judith River	65	305	305	305	305	281	256	25 nonuse	102	298	305	153	0
Unallotted Areas		48	48	48	48	16	16	0	0	32	40	0	0
UL Bend	11694	0	0	0	0	0	0	2434	2434	7000	7500	0	0
Timber Creek	356	0	0	0	0	0	0	0	0	0	0	0	0
Rock Creek	797	0	0	0	0	0	0	265	265	0	0	0	0
River Bottoms	775	0	0	0	0	0	0	258	258	0	0	0	0
Sheep Pasture	722	0	0	0	0	0	0	0	0	0	0	0	0

1/ Allotments #18 (Skunk Coulee/Mud Creek) and #24 (Sand Arroyo/Rock Creek) are each two separate allotments assigned to one operator; the number of allotments on CMR totals 67.

Appendix 6. Public Law 94-223 94th Congress, H.R. 5512, February 27, 1976.

AN ACT

To amend the National Wildlife Refuge System Administration Act of 1966, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That subsection (a) of section 4 of the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd (a) is amended to read as follows:

"(a)(1) For the purpose of consolidating the authorities relating to the various categories of areas that are administered by the Secretary of the Interior for the conservation of fish and wildlife, including species that are threatened with extinction, all lands, waters, and interests therein administered by the Secretary as wildlife refuges, areas for the protection and conservation of fish and wildlife that are threatened with extinction, wildlife ranges, game ranges, wildlife management areas, or waterfowl production areas are hereby designated as the 'National Wildlife Refuge System' (referred to herein as the 'System'), which shall be subject to the provisions of this section, and shall be administered by the Secretary through the United States Fish and Wildlife Service. With respect to refuge lands in the State of Alaska, those programs relating to the management of resources for which any other agency of the Federal Government exercises administrative responsibility through cooperative agreement shall remain in effect, subject to the direct supervision of the United States Fish and Wildlife Service, as long as such agency agrees to exercise such responsibility.

National
Wildlife
Refuge System
Administration
Act of 1966,
amendments.
"National
Wildlife Refuge
System."

"(2) No acquired lands which are or become a part of the System may be transferred or otherwise disposed of under any provision of law (except by exchange pursuant to subsection (b)(3) of this section) unless--

Transfer or
disposal of
lands,
restriction.

"(A) the Secretary of the Interior determines with the approval of the Migratory Bird Conservation Commission that such lands are no longer needed for the purposes for which the System was established; and

"(B) such lands are transferred or otherwise disposed of for an amount not less than--

"(i) the acquisition costs of such lands, in the case of lands of the System which were purchased by the United States with funds from the migratory bird conservation fund, or fair market value, whichever is greater; or

"(ii) the fair market value of such lands (as determined by the Secretary as of the date of the transfer or disposal), in the case of lands of the System which were donated to the System.

The Secretary shall pay into the migratory bird conservation fund the aggregate amount of the proceeds of any transfer or disposal referred to in the preceding sentence.

"(3) Each area which is included within the System on January 1, 1975, or thereafter, and which was or is--

"(A) designated as an area within such System by law, Executive order, or secretarial order; or

"(B) so included by public land withdrawal, donation, purchase, exchange, or pursuant to a cooperative agreement with any State or local government, any Federal department or agency, or any other governmental entity, shall continue to be a part of the System until otherwise specified by Act of Congress, except that nothing in this paragraph shall be construed as precluding--

"(i) the transfer or disposal of acquired lands within any such area pursuant to paragraph (2) of this subsection;

"(ii) the exchange of lands within any such area pursuant to subsection (b)(3) of this section; or

"(iii) the disposal of any lands within any such area pursuant to the terms of any cooperative agreement referred to in subparagraph (B) of this paragraph."

Approved February 27, 1976.

LEGISLATIVE HISTORY:

HOUSE REPORT No. 94-334 (Comm. on Merchant Marine and Fisheries).

SENATE REPORT No. 94-593 (Comm. on Commerce).

CONGRESSIONAL RECORD:

Vol. 121 (1975): Nov. 14, considered and passed House.

Vol. 122 (1976): Feb. 4, considered and passed Senate,
amended.

Feb. 17, House concurred in Senate
amendment.

Appendix 7. Soils limitations and capability classes, Charles M. Russell National Wildlife Refuge, Montana.

Soil limitations

The following soil mapping units on the refuge should not be grazed (W. Larsen personal communication):

- 13 Badlands
- 24E Dilts Clay
- 48 Rock Outcrop
- 50 Shale Outcrop
- 77 Beach Sand
- 88 Riverwash
- 195F Cabbart-Rock Outcrop complex, 15-90 percent slopes
- 241 Dilts-Badlands complex, 15-45 percent slopes
- 243 Dilts-Shale Outcrop complex, 4-45 percent slopes
- 249E Neldore (saline phase)-Dilts-Shale Outcrop complex, 15-45 percent slopes
- 505F Shale Outcrop-Neldore (saline phase) complex, 15-45 percent slopes
- 507F Shale Outcrop-Dilts complex, 45-60 percent slopes

In addition, those mapping unit complexes having badlands, rock outcrop, or shale outcrop included were recognized as having limitations in that no forage allocations should be allotted to the badlands, rock outcrop, or shale portions (Appendix Table 7a). It was recognized that those complexes containing rock outcrop or shale outcrop could provide limited grazing on the remainder of the mapping unit. No AUMs for wildlife or livestock were calculated for the following: rock outcrop, shale outcrop, beach sand, riverwash, and portions of those complexes containing one of the above as a component. A shortened time frame for completion of the EIS did not allow for examination and elimination of all mapping units listed in Appendix Table 7a. Most notable of the omitted mapping units are others including the Dilts series, a commonly represented soil complex component on the refuge.

The problem of soils limitations for grazing was analyzed and resolved in the following manner: it was recognized that certain soils should support no livestock grazing; however, it would be impractical and costly to fence these individual areas to prevent livestock use. Exclusion of an entire area from use because of soils limitations on only a portion of the area is not feasible. A practical way to solve the problem would be to recognize that soils limitations do exist, that it is nearly impossible to deny livestock use or wildlife use but that overall stocking rates should be adjusted accordingly.

Appendix 7. (Cont'd.)

Soil capability classes

Capability grouping shows, in a general way, suitability of soils for most land uses. Groups are made according to limitations of the soils when used for field crops, risk of damage when they are used, and the way they respond to treatment. The grouping does not take into account major and generally expensive land forming that would change slope, depth, or other characteristics of the soils nor possible but unlikely major reclamation projects and does not apply to rice, cranberries, horticultural crops, or other crops requiring special management.

Those familiar with the capability classification can infer from it much about the behavior of soils when used for other purposes, but this classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for range, forest trees, or engineering.

In the capability system, all soils are grouped at three levels: capability class, subclass, and unit. In this report, only the first two levels are given for each mapping unit, since soils on CMR are not generally used for crops.

Capability classes, the broadest groups, are designated by Roman numerals I through VIII. The numerals indicate progressively greater limitations and narrower choices for practical use, defined as follows:

Class I-few limitations restricting use.

Class II-moderate limitations that reduce choice of plants or that require moderate conservation practices.

Class III-severe limitations that reduce choice of plants, require special conservation practices or both.

Class IV-very severe limitations that reduce choice of plants, require very careful management or both.

Class V-not likely to erode but have other limitations, impractical to remove, that limit use largely to pasture, range, woodland, or wildlife.

Class VI-severe limitations that make them generally unsuited to cultivation and limit use largely to pasture, range, woodland, or wildlife.

Class VII-very severe limitations that make them unsuited to cultivation and that restrict use largely to pasture, range, woodland, or wildlife.

Class VIII-limitations that preclude use for commercial plants and restrict use to recreation, wildlife, water supply, or esthetic purposes.

Appendix 7. (Cont'd.)

Capability subclasses are soil groups within one class; they are designated by adding a small letter, e, w, s, or c to the class numeral, for example, IIe. The letter e shows that the main limitation is risk of erosion unless close-growing plant cover is maintained, w shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage), s shows that the soil is limited mainly because it is shallow, salty, droughty, or stony, and c, used in only some parts of the United States, shows that the chief limitation is climate that is too cold or dry.

In Class I, there are no subclasses because soils of this class have few limitations. Class V can contain, at most, only subclasses indicated by w, s and c because soils in Class V are subject to little or no erosion, though they have other limitations that restrict use largely to pasture, range, woodland, wildlife, or recreation.

Appendix 7. (Cont'd.)

Appendix Table 7 a. Soils mapping units having grazing limitations on the Charles M. Russell National Wildlife Refuge, Montana.

Mapping unit name	Mapping unit number	Valley	Fergus	Approximate acreage by county			Garfield	Total
				McCone	Petroleum	Phillips		
Badlands ^{1/} Beach sand ^{1/}	13 77	4219		4147			2267 19	10,633 19
Cabbart-Rock Outcrop complex, 15-90% slopes	195F					3102	10,280	13,382
Cabbart-Yawdim-Rock Outcrop complex, 15-45% slopes	197F					472	627	1099
Dilts clay, 8-25% slopes	24E				958	800		1758
Dilts-Badlands complex, 15-45% slopes ^{1/}	241			848		215		1063
Dilts-Badlands-Bascovy complex, 15-45% slopes	242E					29	499	528
Dilts-Neldore-Shale Outcrop complex 8-45% slopes	382	23,214	29,364		1353	27,966	1756	83,653
Dilts-Shale Outcrop complex, 4-45% slopes	243				548	18,965	271	19,784
Dilts-Yamac-Badlands complex, 15-45% slopes	246			1509			270	1779
Kobar-Yawdim-Shale Outcrop complex, 8-25% slopes	365D						589	589
Lambeth-Badlands complex, 15-60% slopes	371			681				681
Neldore (saline phase)- Bascovy-Shale Outcrop complex, 8-25% slopes	389E					7074	250	7324
Neldore (saline phase)- Dilts-Shale Outcrop, complex, 15-45% slopes	249E	23,654			1155	2676	546	28,031

Appendix Table 7a. (Cont'd.)

Neldore-Dilts-Shale Outcrop complex, 8-60% slopes	386F				5132	14,649	690	20,471
Neldore-Shale Outcrop-Bascovy complex, 15-60% slopes	384E				1235	3266	14,702	19,203
Neldore-Shale Outcrop complex, 15-60% slopes	387F		6	8	7928	16,821	1744	26,499
Riedel-Delphill-Rock Outcrop complex, 25-60% slopes	465F						724	724
Riedel-Rock Outcrop complex, 25-60% slopes	463F					2430	1321	3751
Riverwash ^{1/}	88				162	324		486
Rock Outcrop ^{1/}	48					39	3335	3374
Shale Outcrop ^{1/}	50				80	121	514	14,769
Shale Outcrop-Dilts complex, 45-60% slopes ^{1/}	507F	14,054				1198		1198
Shale Outcrop-Neldore complex, 25-60% slopes	506F					2107	402	2509
Shale Outcrop-Neldore (saline phase) complex	505F					11,877		11,877
15-45% slopes ^{1/}								
Yawdim-Badlands-Cambeth complex, 15-60% slopes	611			237			379	616
Yawdim-Rock Outcrop-Cabbart complex, 15-60% slopes	613F				56	36	17,147	17,239
Yawdim-Shale Outcrop complex, 15-45% slopes	618E					20	447	467
Yetull-Riedel-Rock Outcrop complex 25-60% slopes	622F						2961	2961
Yawdim-Badlands-Gerdum complex, 15-60% slopes	612				88	90	1578	1756
Total								298,223

^{1/} Class VIII lands unsuitable for livestock grazing. The remaining mapping units are recognized as being capable of supporting limited livestock grazing.

Appendix 8. Range survey methodology and productivity, Charles M. Russell National Wildlife Refuge, Montana.

METHODOLOGY

A range site and condition survey was conducted on CMR in 1978 by four range specialists. The survey was in accordance with the 1976 SCS National Range Handbook.

Soils mapping was done prior to the range survey in accordance with standard soil survey procedures. Mapping procedures consisted of identifying known soil series or complexes and mapping these units on 1:24000 aerial photographs. Once the soils mapping was completed for a given area, range/soils specialists devised a correlation key for mapping range sites on the basis of soils units. Range site mapping units are based upon soils mapping units but are expressed in terms of general soils features, instead of series names and slope gradients used in standard soil survey procedures. For example, a soil identified as an Absher clay loam, 0-4 percent slopes in the soil survey would be considered a dense clay range site for purposes of range survey procedures. This key, which contains all range site/soils mapping units present on the refuge, is on file in the refuge headquarters in Lewistown.

Range sites and condition classes for all lands within the refuge above the high water mark of Fort Peck Reservoir, 2,250 feet msl, were mapped on 1:24000 scale aerial photographs. The range sites were then tallied by site and condition class acreages for all sections within the refuge by FWS. These range site summaries are also on file in Lewistown. Following the acreage tabulations, each section was assigned to a precipitation zone and geographic location, and initial stocking rates were tabulated in terms of total AUMs/section in accordance with the SCS Montana Grazing Guides. This stocking rate is based upon the amount of forage that can be taken during normal or average years and still maintain or improve the range condition. Recommended stocking rates are obtained by examining the soil's properties, which are fundamental to this inventory system and the basis for naming a given range site and upon geographic and topographic features and climate (precipitation). The recommended stocking rates assume that reasonably uniform grazing will occur over the entire area. Stocking rate cuts for inaccessibility because of topography or lack of water are not provided in the SCS Montana Grazing Guides and are left to the planner's or manager's knowledge of the area for final stocking rate appropriations (Appendix 15).

Clipping studies on pristine sites resulted in information which lends insight to the productivity of these sites at climax and the percent weight composition by species in the climax community. Normally, productivity of different sites is expressed in terms of annual production by air dry weight in favorable years, unfavorable years, and long-term average for sites rated as excellent condition. Comparison of the present range situation expressed as a percentage of the potential at climax provides the observer with an ecological site condition rating.

Appendix 8. (Cont'd.)

Appendix Table 8a summarizes expected annual site productivity for range sites commonly found on the wildlife refuge. Data presented are taken from SCS range guides and technical guides and are presented only as general figures for those sites. The information does provide insight as to how soils limitations such as depth, texture, and salinity problems affect vegetative productivity. Additional information regarding site productivity has been collected by Producers in response to differences in precipitation (Appendix Table 8b).

Criticisms concerning this survey were particularly directed toward the fact that 1978 was an abnormally high moisture year. Vegetative production was much greater than normal on the refuge. Critics of the survey indicated that perhaps this biased the range condition upward and provided a distortion that range conditions were better than the actual situation.

It should be stated that range condition determined by SCS methods is based upon percent by weight of the current year's growth (actual air-dry measurements or estimates) of each species in the community and the percent that should be present in a climax situation. The high moisture year of 1978 would have provided as realistic a situation as one of drought; annual weeds would normally not grow at all during an exceptionally dry year, whereas they would be abundant in wet years. Perennial grasses, forbs, and shrubs would be less affected because of better adapted root systems. Rates of vegetative production in perennial species would be less likely to show the extreme fluctuations shown by annuals during years of high or low rainfall.

Through the summer, periodic clipping evaluations were made to verify range survey results. No major discrepancies were found.

RANGE SITES AND CONDITION

There are many differences in soils and climate of the survey area. For these reasons, there are several different kinds of rangeland. These different kinds of rangeland are called range sites. The best adapted group of plants is called the potential or climax community for the site. The climax plant community for a site varies slightly from year to year, but the kinds and percentage of plant composition remain about the same if undisturbed. Each range site has the ability to produce a different kind and/or amount of climax vegetation than any other range site.

The original or climax combination of plants fitted the soil and climate of the site so perfectly that other kinds of plants could not move in unless the area was disturbed. So consistent is the relationship between plants, climate, and soil, that the climax plant community can be predicted even on severely disturbed sites if the soil is identified.

Range conservationists and soil scientists, working together, group soils which naturally grow the same climax plant communities into range sites.

Appendix 8. (Cont'd.)

Repeated overuse by grazing animals, excessive burning, or plowing result in changes in the kinds, proportions, or amounts of climax plants in the plant community. Depending on the kind and degree of disturbance, some kinds of plants increase while others decrease. If disturbance is severe, plants which do not belong in the climax plant community may invade. Plant response to grazing use depends on the kind of grazing animal, season of use, and how closely the plant is grazed. Under good management, near-climax plant communities can be maintained or, in the case of disturbed vegetation, the climax plant community will be gradually re-established unless the soils have been seriously eroded.

Plants are categorized into decreasers, increasers, or invaders according to their response to grazing pressures.

Decreasers are climax dominant plants that tend to decrease in relative amounts under close grazing. They are generally the most productive and most palatable to grazing animals.

Increasers are plants in the climax vegetation that increase in relative amounts as the more desirable decreaser plants are reduced by close grazing. They are generally less palatable, woody, spiny or so short they escape close grazing.

Invaders are weedy type plants or exotics that cannot stand the competition of climax vegetation. They fill the void if the climax plants are diminished or eliminated by disturbance.

Range condition is an expression of the present kind of vegetation in relation to the climax plant community for that site. The more nearly the present kinds and amounts of plants are like the climax plant community, the higher the range condition.

A range is in excellent condition if 76-100 percent of the vegetation is of the same kinds as the climax stand. It is in good condition if the percentage is 51-75. It is in fair condition if the percentage is 26-50, and in poor condition if the percentage is less than 25.

The present range condition provides an index to changes which have taken place in the plant community. More importantly, however, range condition is a basis for predicting the kinds and amounts of changes in the present plant community which can be expected from management and treatment measures.

Thus, the range condition rating indicates the nature of the present plant community, and the climax plant cover for the range site represents a goal toward which rangeland management may be directed.

Knowledge of climax plant communities of range sites and the nature of present plant communities in relation to that potential is important in planning and applying conservation on rangeland. Such information is the basis for selecting management objectives, design of grazing systems, managing for wildlife, determining potential for recreation, and for rating watershed conditions.

Any management objective on rangeland must provide for a plant cover which will adequately protect or improve the soil and water resources and meet the needs of the operator. This usually involves

Appendix 8. (Cont'd.)

increasing desirable plants and restoring the plant community to near climax conditions. Sometimes, however, a plant cover somewhat below climax will better fit specific grazing needs or wildlife habitat while still protecting soil and water resources.

All range sites respond favorably to proper grazing use and systems of grazing deferments.

LEGEND FOR RANGE SITES

Range sites are kinds of rangeland that differ from each other in their ability to produce a significantly different kind or amount of climax or original vegetation. Only natural grasslands are classified as range sites. To fully designate a range site, a soil-group name is combined with the precipitation (pz) zone and geographic location; e.g. sandy 10-14" pz; glaciated plains, Montana.

The following range soil-groups are listed in presumed order of natural productivity, considering total air-dry weight of all herbage produced through the entire year by all seed plants/unit of area, in ordinary years under climax plant cover.

Range site descriptions:

- I. Soil groups that can produce more herbage than ordinary range upland because of plainly superior soil moisture availability.

WL - wet land: lands where seepage, ponding, etc., raise the water table to above the surface during only a part of the growing season. Too wet for cultivated crops but too dry for common reed, cattails, or true aquatics.

Sb - subirrigated: lands with an effective subsurface ground water table and water rarely over the surface during the growing season.

SL - saline lowland: subirrigated and overflow lands where salt and/or alkali accumulations are apparent and salt tolerant plants occur over a major part of the area.

Ov - overflow: areas regularly receiving more than normal soil moisture because of run-in or stream overflow.

- II. Soil groups with no obvious soil or moisture limiting factors. The vegetation can make a normal response to climate.

Sa - sands: sands and loamy sands more than 20 inches deep.

Sy - sandy: coarse to fine sandy loams more than 20 inches deep.

Si - silty: soils more than 20 inches deep of very fine sandy loam, loam or silt loam. This includes soils with 2 inches or more of silt loam over clayey subsoils.

Appendix 8. (Cont'd.)

Cy - clayey: granular clay loam, silty clay loam, silty clay, sandy clay, or clay more than 20 inches deep.

III. Soil groups with characteristics or topographic features that limit moisture-holding capacity or affect infiltration rates.

TH - thin hilly: loamy or clayey soils on steep or hilly landscapes with a thin A horizon and weak or no structure in the subsoil but with significant root penetration deeper than 20 inches; usually calcareous but contain less than 15 percent calcium carbonate.

St - stony: soils more than 20 inches deep with cobbles or stones occupying 40-80 percent of the surface.

Ly - limy: soils more than 20 inches deep that are nearly white and very limy (15 percent or more calcium carbonate) within 4 inches of the surface.

SwC - shallow clay: shallow granular clay soils that are 10-20 inches deep to underlying shale or nearly impervious clays.

SwG - shallow to gravel: soils that are 10-20 inches deep to sandy gravel. Few roots penetrate deeper than 20 inches.

Sw - shallow: soils 10-20 inches deep to hard rock or softbeds of decomposed granite, siltstone, or sandstone; few roots penetrate deeper than 20 inches.

Ps - panspots: areas of silty, clayey, or sandy soils in complex with shallow depressions of hard clays or other nearly impervious materials at or near the surface. The shallow depressions occupy 20-50 percent of the site.

DC - dense clay: relatively impervious deep nongranular clays - may be overlain by thin ineffectual layers of other materials; the dispersed layer is very hard to extremely hard when dry and very sticky when wet.

TB - thin breaks: mixed soils of various depths with hard rock or other resistant bed outcroppings at different levels on steep irregular slopes; trees may occur locally above outcrops.

Gr - gravel: coarse textured soils with more than 50 percent gravel and cobbles underlain by loose sand and gravel at less than 20 inches.

Appendix 8. (Cont'd.)

VS - very shallow: areas where few roots can penetrate deeper than 10 inches. Outcropping of gravel or bedrock is characteristic; joints in bedrock may develop deep soil pockets usually marked by tall grasses, shrubs, or stunted trees.

SU - saline upland: soils more than 20 inches deep with salt and/or alkali accumulations; salt tolerant plants occur over a major part of the area.

Sh - shale: readily puddled uplands where some unweathered angular raw shale fragments are exposed at the surface and little, if any, soil profile development is evident.

B1 - badlands: nearly barren lands broken by drainages intermingled with small grazable areas.

Appendix 8. (Cont'd.)

Appendix Table 8a. Site productivity of selected range sites on the Charles M. Russell National Wildlife Refuge, Montana.¹

Range site	High favorable years (lbs./acre)	Low unfavorable years (lbs./acre)	Average (lbs./acre)
Overflow	3,000	2,000	2,500
Saline lowland	3,500	2,000	3,000
Sandy	2,000	1,000	1,600
Silty	1,800	1,000	1,500
Clayey	1,800	900	1,300
Thin hilly	1,450	850	1,200
Shallow clay	1,200	700	1,000
Shallow to gravel	1,200	700	1,000
Shallow	1,100	600	900
Panspots	1,200	700	1,000
Dense clay	1,100	600	900
Thin breaks	1,100	600	900
Shale	500	300	400
Saline upland	600	350	500
Badlands	500	300	400

¹ 10-14 inches ppt zone. Expected annual production, air dry weight (excellent condition site).

Appendix 8. (Cont'd.)

Appendix Table 8b. Comparison of aerial production in 1977 and 1978 on Upper Nelson Creek, approximately 12 miles east of the Charles M. Russell National Wildlife Refuge, Montana.¹

Community	1977 production (lbs./acre)	1978 production (lbs./acre)	1977:1978 production
Little bluestem	748	934	1.25
Silver sagebrush/ western wheatgrass/ blue grama	712	1,801	2.53
Little bluestem- bluebunch wheatgrass	498	1,025	2.06
Blue grama threadleaf sedge/needle-and-thread	361	1,148	3.86
Bluebunch wheatgrass/ blue grama-threadleaf	331	1,143	3.45
Needle-and-thread- western wheatgrass/ blue grama	297	1,264	4.25
Needle-and-thread/blue grama-threadleaf sedge	194	1,015	5.23
Western wheatgrass/ blue grama	180	1,488	8.28
Blue grama	176	692	3.93
Blue grama/western wheatgrass	14	1,740	122.00

¹ Data from R. Prodgers 1979.

Appendix 9. Range condition class breakdown by livestock operator and allotment on the Charles M. Russell National Wildlife Refuge, Montana.

Permittee's name	Allotment	Allotment size (acres)	Allotment range condition class (%)			
			Poor	Fair	Good	Excellent
Mitchell	Antelope Creek	10,065	01	02	97	00
Schwenke	"	10,065	01	02	97	00
"	East Slippery Ann	26,556	00	04	96	00
Square Butte Grazing Assoc.	"	26,556	00	04	96	00
Square Butte Grazing Assoc.	Antelope Creek	10,065	01	02	97	00
Kelsey	Rock Creek	27,843	04	05	91	00
Peters	"	27,843	04	05	91	00
Robinson	Nichols Coulee (#3)	51,865	04	11	83	02
"	" (#4)	51,865	01	02	72	25
Nesbit	Beauchamp Creek	19,755	00	00	67	32
Matovich, J.	N. Hawley Creek	1,064	00	00	45	55
"	Fourchette Creek	585	00	00	00	100
Wiederrick Brothers	Telegraph Creek	10,269	03	01	94	02
"	UL Bend	11,149	10	07	73	10
Kluck	Box Elder (#3)	599	00	25	75	00
"	Box Elder	2,366	00	09	88	03
Koss Brothers	Larb Hills	20,220	00	00	03	97
Barnard	Kill Woman	8,486	05	07	82	06
Etchart	Carpenter Creek	36,127	01	03	79	17
Burke	Cabin Coulee	19,459	15	25	55	05
Wittmayer Grazing Assoc.	Seven Point	38,701	00	00	83	17
Silver Dollar Grazing Assoc.	Silver Dollar	5,740	00	00	100	00
Eide	Skunk Coulee/Mud Creek	20,137	00	00	83	17
Lenz	Duck Creek	8,213	00	00	100	00
Skyberg Brothers	Fort Peck common	2,974	00	19	81	00
Yager, M.	"	2,974	00	19	81	00
Yager, G.	"	2,974	00	19	81	00

Appendix 9. (Cont'd.)

Nickels, R.	Bear Creek	5,407	00	11	89	00
Nickels, L.	" "	5,407	00	11	89	00
Bennett	Bobcat Creek	10,113	00	03	96	01
Webb Estate	" "	10,113	00	03	96	01
Pointer	" "	10,113	00	03	96	01
Boucher	Spring	6,469	00	43	57	00
Rosenwald	Bobcat	10,113	00	03	96	01
"	Spring	6,469	00	43	57	00
Blevins & Wright	Bobcat	10,113	00	03	96	01
Fergueson	Sand Arroyo/Rock Creek	4,372	00	51	47	02
Nelson	Rock Creek	5,811	00	54	46	00
Collins	Bug "	8,731	02	33	61	04
Twitchell, J.	Nelson "	13,310	01	22	57	20
Paine	Pine Coulee	241	00	00	100	00
McKerlick	Big Dry	9,528	00	15	66	19
Twitchell, W.	Snap Creek	7,033	00	52	47	01
Taylor	Lone Tree	2,532	00	20	80	00
Boughton (sold to Coldwell 1979)	Coyote Basin	12,493	00	14	86	00
Henning	Box Creek	10,767	00	00	73	27
Edwards, K.	Norville Creek	4,059	00	01	44	55
Edwards, L.	Spring Draw	3,886	00	13	62	25
Pinkerton Brothers	Sage Creek Point	5,439	00	00	30	70
Isaacs	Penick Coulee	5,866	00	00	35	65
Murnion	Gilbert Creek	26,749	00	21	59	20
Coldwell	" "	26,749	00	21	59	20
"	Points Pasture	3,370	00	53	47	00
Cole	Gilbert Creek	26,749	00	21	59	20
Hays	Crooked Creek	19,856	00	05	74	21
Binion	Hell Creek	25,990	00	05	51	44
Trumbo	Brownie Butte	4,063	00	00	24	76

Appendix 9. (Cont'd.)

Buffington	Snow Creek	14,933	00	02	40	58
West	Hill Coulee	8,997	00	01	67	32
Coulter	Billy "	510	00	02	44	54
McKeever	Billy Creek	10,162	00	00	55	44
Watt	Slaymaker	1,634	00	00	22	78
Wilson	Seven Blackfoot	12,096	00	04	87	09
Loomis, E.	Herman Ridge	1,805	00	00	100	00
"	Devils Creek common	9,935	00	16	81	03
Loomis, D.	Herman Ridge	1,805	00	00	100	00
"	Devils Creek common	9,935	00	16	81	03
Stafford	" "	9,935	00	16	81	03
Phipps Brothers	" "	9,935	00	16	81	03
"	Ghost Coulee	4,101	00	00	88	12
Huston	Deadman Coulee	3,011	00	00	81	19
Pierson	Lost Creek	9,025	00	02	89	09
Six-X Ranch	Grass Coulee	15,022	00	00	76	24
Matovich, M.	Germaine Coulee	12,446	00	09	88	03
Marks	79 Trail	3,806	00	00	36	64
Two Crow Land	Deer Coulee	11,861	00	10	68	22
& Cattle						
Two Crow Land	Soda Creek	22,746	00	02	98	00
& Cattle						
Two Crow Land	Musselshell Trail	16,635	00	01	98	01
& Cattle	Soda Creek	22,746	00	02	98	00
Harris	" "	22,746	00	02	98	00
Nunn	Musselshell Trail	16,635	00	01	98	01
"	" "	16,635	00	01	98	01
Hedman	Hanson Flat	4,160	00	04	92	04
Rindal, D.	E. Indian Butte	26,055	00	01	98	01
"	" "	26,055	00	01	98	01
Rindal, O.	" "	26,055	00	01	98	01
Cimrhakl, D.	" "	26,055	00	01	98	01
Cimrhakl, F.	" "	26,055	00	01	98	01
Holland	" "	26,055	00	01	98	01
Irish, G.	" "	26,055	00	01	98	01

Appendix 9. (Cont'd.)

Komarek, G.	E. Indian Butte	26,055	00	01	98	01
"	Mobridge	702	00	43	39	18
"	W. Indian Butte	12,720	00	08	75	17
Komarek, J.	E.	26,055	00	01	98	01
"	"	12,720	00	08	75	17
Komarek, R.	E.	26,055	00	01	98	01
McNulty	E.	26,055	00	01	98	01
"	W.	12,720	00	08	75	17
Mathison (leased to Jordan)	E.	26,055	00	01	98	01
Willmore, W.	"	26,055	00	01	98	01
Zahn, A.	"	26,055	00	01	98	01
Zahn, W.	"	26,055	00	01	98	01
Zahn, E. (leased to J. Willmore)	"	26,055	00	01	98	01
Irish, D.	W.	12,720	00	08	75	17
Murray	"	12,720	00	08	75	17
Umstead	"	12,720	00	08	75	17
Norskog	"	12,720	00	08	75	17
"	Two Calf	5,594	00	00	85	15
Demars	Judith River	1,016	00	46	54	00

Appendix 10. Direct economic impacts of changes in livestock forage supplies - livestock businesses that use the Charles M. Russell National Wildlife Refuge.

The purpose of this analysis is to estimate direct economic impacts on livestock producers from changes in forage allocations on the Charles M. Russell National Wildlife Refuge. Although sheep and horses use the refuge, cattle account for over 90 percent of the livestock grazed. A little over 40,000 head of cattle use the refuge to obtain an average of about 13 percent of their annual nutrient requirements. The grazing season is predominately spring-summer-fall with some winter grazing.

Procedures

Procedures for estimating economic impacts include 1) grouping producers by size of operation; 2) preparing cost and return budgets for each group; and 3) measuring impacts on businesses with the use of linear programming models.

Producers are stratified into four groups based on estimated herd size:

<u>Size Group</u>	<u>Producers</u>
0-99	12
100-199	19
200-299	19
300 and over	37
Total	87

Enterprise budgets in Appendix Tables 10a-d present costs and returns for each size group using 1979 as the base year. Production and price assumptions shown in the tables are representative for the area based on producer estimates and USDA published production data. Costs other than feed are unpublished USDA numbers taken from field surveys and indexed to account for inflation. Interest on operating capital assumes funds are in use six months at the Production Credit Association's average annual interest rates. Interest on investment is based on Federal Land Bank rates. General Farm Overhead includes utilities, professional fees, organization dues, and other items not used exclusively for livestock productions.

The analysis of impacts assumes several things: 1) that annual feed sources are limited to those currently available on the ranches; 2) that rental or purchase of pasture is not possible; and 3) that the cost of shipping hay into the area makes this alternative prohibitive. Therefore, reductions in herd size and reallocation of present feed supplies are considered the only mitigating actions available to producers.

In the Linear Programming models, impacts are first estimated for each herd size group (Appendix Tables 10j-m). Included is a wide range of adjustments which may occur within each group. Weighted average and aggregate adjustments summarized in Appendix Table 10e are derived from

Appendix 10. (Cont'd.)

these size group analyses. Aggregate direct producer impacts shown in Appendix Table 10e are annual estimates which must be multiplied by years in the planning period to derive total project impacts. Aggregate impacts are measured in terms of changes in gross income, cash expenditures, return above cash costs (net income), cattle numbers, and labor use.

The Linear Programming Approach generated a \$12.87 per AUM value of the CMR forage to the CMR permittees. This value was thus utilized as an integral part of the Linear Programming Approach. For a discussion of these shadow prices or values in a Linear Programming context, see Betters, 1977, or any Management Science text.

The analysis indicates that producers would incur a 3 percent reduction in aggregate gross income with the Proposed Action, while the Intensive Wildlife and No Grazing options would trigger a 6 percent and 11 percent reduction, respectively. Change in gross income with the Multiple Use alternative would be small - down less than 1 percent. Aggregate gross income effects of the Proposed Management alternative seem to be relatively small.

Aggregate net income changes or returns above cash costs are more pronounced for the alternative management systems. Reductions range from 1 percent with Multiple Use to 12 percent with No Grazing. Net income is the money producers use to pay family living expenses, replace old or worn equipment, and make mortgage payments on borrowed investment capital. A reduction in this variable will adversely affect producers, particularly those with large outstanding debts. Mortgage payments usually have priority in expenditures of net income. Therefore, actions which reduce net income will impact most heavily on dollars available for family use and maintenance of depreciable assets. Average annual dollar reductions per producer with each action are: Proposed Action, \$3,057; Intensive Wildlife Management, \$5,552; Multiple Use, \$690; and No Grazing, \$9,724. For individual producers, these values will vary, depending upon the size of the operation. The full implications of these income adjustments cannot be assessed unless information is available relating to producer dependency on livestock for his total livelihood. This kind of data is not available. But it can be assumed that producers who rely solely on cattle for income will be affected more than those with multiple enterprises or off-farm income.

The average herd size for producers using the refuge is about 483 cattle with a range from less than 10 to more than 4,000. Average reductions in herd size with the different areas are: Proposed Action, 16 cattle; Intensive Wildlife Management, 29 cattle; Multiple Use, 4 cattle; and No Grazing, 51 cattle. Herd reductions for individual producers will deviate from the average. Herd reductions will cause some diseconomics in the businesses through less efficient use of resources which will cause operating costs per cow to increase. These cost increases are shown on Appendix Table 10f for different reductions in refuge grazing. Part of the cost increases stem from loss of a low cost forage, while part comes from higher fixed cash costs per cow.

Appendix 10. (Cont'd.)

Some reductions in labor use and labor efficiency are associated with the alternative management programs on the refuge. Aggregate labor needs decline as follows: Proposed Action, 6.5 man-years; Intensive Wildlife Management, 11.9 man-years, Multiple Use, 1.4 man-years; and No Grazing, 20.9 man-years. The reduction in hired labor is a direct loss of employment. Family labor hours represent a decrease in efficiency since the producer will probably continue with his livestock enterprise but have less work to do with his available time.

Individual Producer Impacts

The discussion above has assessed average impacts for producers as a group. There are differences among individual refuge users which averages cannot identify. Data limitations restrict analysis of these differences. However, these are two which can be considered. Herd size and refuge dependency to annual forage can interact to determine some individual impacts. A distribution of producers based on these criteria is shown in Appendix Table 10g. The percentages indicate that producers with 100-200 cows tend to be more dependent on refuge forage than either very small or very large herds. Some producers in all size groups have high dependencies. There are three small herds with over 50 percent dependency. However, these each have fewer than 11 cattle, so impacts on proposed adjustments in forage will be small. In the 100-199 cattle group, one producer is 74 percent dependent, and three producers are 31-50 percent dependent on the refuge. Similarly, the 200-299 cattle group includes one producer 60 percent dependent, and two producers 31-50 percent dependent. Among herds of 300 or more cattle are four producers with 31-50 percent dependency.

Impacts on high dependency producers are more severe than the average. Appendix Table 10f illustrates these differences for the Proposed Action. Average reductions in return above cash costs range \$385 for small herds up to \$4,900 for large herds. Producers with high dependencies will incur greater losses as indicated in Appendix Table 10h. The example assumes a high dependency of 31 percent. Producers with dependencies above this level will receive proportionately greater impacts.

Appendix 10. Summary of grazing permittee operations and impacts of implementing various alternatives on the Charles M. Russell National Wildlife Refuge, Montana.

Permittee's name	herd size (est.) ^{2/}	Annual total AUMs required (size x 12)	CHR federal AUMs	Federal use on CHR (1979 %)	No Action	Proposed Action	Intensive Wildlife Management	Multiple Use	No Grazing
Mitchell	170C-5H	2160	82	04		Ne	-L	+L	-L
Schwenke	500C	6000	740	12		-L	-L	+L	-L
Square Butte Grazing Assoc.	3158C	37,896	987 active 435 nonuse	03		-L	-M	+L	-M
Kelley	124C	1488	584	39		-M	-H	+L	-H
Peters	310C-5H	3840	881 active 199 nonuse	23		-M	-H	+L	-H
Robinson	1387C	16,644	5181	31		-M	-M	-L	-H
Nesbit	425C	5100	488	10		0	-L	+L	-L
Matovich, J.	410C	4920	95	02		Ne	-L	Ne	-L
Wiederrick Brothers	800C-10H	9840	1837	19		-L	-H	Ne	-H
Kluck	1000C-6H	12,144	253	02		-L	-L	Ne	-L
Koss Brothers	265C	3180	420	13		+L	-L	+M	-L
Barnard	434C-12H	5496	336	06		0	-L	Ne	-L
Etchart	5640C-50H	68,680	2736	04		-L	-M	-L	-M
Burke	536C-20H	6912	2044	30		-M	-H	-L	-H
Wittmayer Grazing Assoc.	786C-500Y	13,632	1919	14		-L	-H	+L	-H
Silver Dollar Grazing Assoc	675Y	5670	656	12		-M	-M	-M	-M
Eide	265C-2H	3228	1056	33		0	-H	+M	-H
Lenz	112C	1344	395 active 41 nonuse	29		-L	-L	-L	-M
Skyberg Brothers	300C	3600	50	01		-L	-L	+L	-L
Yager, M.	15C	180	76 active	42		-L	-L	+L	-L
Yager, G.	65C	780	14 nonuse	13		-L	-M	+L	-M
Nickels, R.)	378C joint	4536	215 joint	09	joint	0	-M	+L	-M
Nickels, L.)	herd	herd	215 herd	herd					
Bennett	62C	744	99	13		-L	-L	-L	-L
Webb Estate	nonuse	0	70 nonuse	00		Ne	-L	Ne	-L
Pointer	160C	1920	211	11		-L	-M	-L	-M
Boucher	100C-25H	1800	163	09		-L	-M	-L	-M
Rosenwald	360Y	3024	21 active 1185 nonuse	00		-L	-M	-L	-M

Appendix 10 . (Cont'd.)

Blevins & Wright Ferguson	unknown 150C-6H	unknown 1944	255 542 active 2 nonuse	unknown	-L -H	-M -H	-L -H
Nelson Collins	326C-10H 750C-20S	4152 9048	437 986 active 10 nonuse	11 11	-M -M	-M -M	-M -M
Twitchell, J. Paine	375C-30H 260C-110S	5220 3184	1791 28	34 00	-M -L	-M -L	-M -L
McKerlick	320C-1240S	6816	912	13	-H*	-H*	-H*
Twitchell, W. Taylor	150C-600S-4H 110C	3336 1320	1033 276 active 276 nonuse	31 21	-H -M	-H -M	-H -H
Boughton (sold to Coldwell 1979)*	235C-11H	3084	1846	60	-M	-H	-H
Henning	600C	7200	936	13	0	-M	-M
Edwards, K.	1100S-10C-2H	2808	395	14	-H*	-H*	-H*
Edwards, L.	130C-3H	1632	353	22	-M	-M	-M
Pinkerton Brothers	130C-100Y-15H	2760	343 active 380 nonuse	12	-L	-M	-M
Isaacs	280C-6H	3504	833	24	-L	-L	-L
Murnion	500C	6000	2388	40	-H	-H	-H
Coldwell	1800S-770C-18H	13,992	1379	10	-M	-M	-M
Cole	126C	1512	577	38	-M	-H	-H
Hayes	619C-400S-20H	8868	1932	22	-L	-L	-L
Binton	2500C-250H	36,000	2255	06	-L	-L	-L
Trumbo	360C-150S-5H	4800	525	11	-M	-L	-L
Buffington	309C-6H	3852	1371 active 6 nonuse	36	-L	-M	-H
West	230C-16H	3144	583	19	-M	-M	-H
Coulter	375C-5H	4620	11	00	-L	-L	-L
McKeever	205C-6H	2604	355	14	-M	-M	-M
Walt	250C-12H	3288	115 active 2 nonuse	03	-L	-L	-L
Wilson	258C-7H	3264	730	22	-M	-M	-H
Loomis, E.	150C-8H	1992	126	06	-L	-M	-H
Loomis, D.	60C	720	121	17	-L	-M	-H
Stafford	51C-12H	900	158	18	-L	-M	-H
Philpps Brothers	200C-10H	2640	483 active 68 nonuse	18	Ne	-M	-M
Iluston	125C-8H	1692	405	24	-M	-H	-H
Pierson	580C-25H	7560	599	08	0	-M	-H
Six-X Ranch	131C-3H	1644	1218	74	-L	-M	-H

Negligible
impact for
all allot-
ments under-
this alter-
native.

Appendix 10 . (Cont'd.)

Matovich, M.	877C	10,524	900	09		-M	-L	-M
Marks	213C-4H	2652	142	05		Ne	+L	-M
Two Crow Land & Cattle	2360C-15H	28,680	3491	12		-L	-L	-M
Harris	250C-110H	5640	804 nonuse	00		-M	-M	-M
Nunn	300C-8H	3792	489	13		-M	Ne	-M
Hedman	100C-5H	1320	130	10		-L	Ne	-M
Rindal, D.	360C-40H	5280	768	15		-L	Ne	-M
Rindal, O.	200C	1200	52	04		-L	Ne	-L
Cimrhaki, D.)	120C-2H Joint	1488	115	26		-L	Ne	-M
Cimrhaki, F.)	ownership		266			-L	-L	-M
Holland	790C-11H	9744	249	03		-L	Ne	-L
Irish, G.	150C-5H	1920	214	11		-L	-L	-M
Komarek, G.	200C	1200	161	13		-H	-L	-H
Komarek, J.	220C-4H	2736	110	04		-L	Ne	-M
Komarek, R.	96C-3H	1224	195	16		-L	Ne	-L
McNulty	35C-1H	444	57	13		-L	Ne	-L
Mathison (leased to Jordan)	8C	96	50	52		-L	Ne	-L
Willmore, W.	250C	3000	127	04		-L	Ne	-L
Zahn, A.	11C	132	67	51		-L	Ne	-L
Zahn, W.	8C	96	50	52		-L	Ne	-L
Zahn, E. (leased to J. Willmore)	76C	912	107	12		-L	-L	-M
Irish, D.	67C-2H	852	81	10		-L	+L	-L
Murray	128C	1536	115	07		-L	+L	-M
Umstead	50C	600	92 nonuse	00		-L	+L	-L
Norskog	350C-3H	4272	405	09		-L	+L	-M
Demars	85C	1020	48	04		-L	Ne	-L

1/ C=cow=1 AUM; H=horse=2 AUMs; S=sheep=.2 AUM; and Y=yearling=.7 AUM. L=low impact; M=moderate impact; H=high impact; O=no impact; +=positive impact; -=negative impact; Ne=negligible.

2/ Information from FWS (1975-79). (Filled out by respective operators; assumed to be correct.)

*Change of livestock class = high impact.

Appendix Table 10 a. Cost and returns, beef cow enterprises with up to 99 head, Charles M.
Russell National Wildlife Refuge

Item	Unit	Number	Average weight	Price Cwt	Total Value
Sales:					
Steer calves	Head	23	430	71.23	7,045
Heifer calves	Head	13	410	62.82	3,348
Yearling steers	Head	--	--	--	--
Yearling heifers	Head	4	680	56.02	1,524
Cull cows	Head	5	950	36.99	1,757
Total					13,674
Total/cow					244.18
			Total Value	Value/Cow	
Cash costs:					
BLM grazing fee			13	.23	
Wildlife Refuge			167	2.98	
Private range lease/rent			451	8.05	
State lease			43	.77	
Hay (produce)			1,454	25.96	
Hay (purchase)			--	--	
Protein supplement			1,814	32.39	
Irrigated pasture			--	--	
Salt and mineral			149	2.66	
Concentrate feeds			--	--	
Veterinary and medicine			296	5.29	
Hired trucking			92	1.64	
Marketing			249	4.45	
Fuel and lubricants			798	14.25	
Repairs			574	10.25	
Land taxes			465	8.30	
Other taxes			101	1.80	
Insurance			87	1.55	
Interest on operating capital			367	6.55	
General farm overhead			458	8.18	
Other cash costs			--	--	
Hired labor			139	2.48	
Total cash costs			7,717	137.80	
Other Costs:					
Family labor			2,185	39.02	
Depreciation			1,665	29.73	
Interest on investment					
Other than land			3,504	62.57	
Interest on land			9,418	168.18	
Total other costs			16,772	299.50	
Total all costs			24,489	437.30	
Return above cash costs			5,957	106.38	
Return above cash costs and family labor			3,772	67.36	
Return to total investment			2,107	37.63	
Return to land			-1,397	-24.95	

Production Assumptions: Average herd 56 cows; 90 percent calf crop with pregnancy testing; 5 percent calf loss to weaning; 20 cows per bull; 25 percent of heifer calves held for replacement; 4 percent cow loss; 13 percent dependent on wildlife refuge for annual feed.

Appendix Table 10 b. Costs and returns, beef cow enterprises with 100-199 head, Charles M. Russell National Wildlife Refuge

Item	Unit	Number	Average weight	Price Cwt	Total Value
Sales:					
Steer calves	Head	57	430	71.23	17,458
Heifer calves	Head	25	410	62.82	6,439
Yearling steers	Head	--	--	--	--
Yearling heifers	Head	12	680	56.02	4,571
Cull cows	Head	16	950	36.99	5,622
Total					34,090
Total/cow					254.40
			Total Value	Value/Cow	
Cash costs:					
BLM grazing fee			238	1.78	
Wildlife Refuge			731	5.46	
Private range lease/rent			1,130	8.43	
State lease			113	.84	
Hay (produce)			2,237	16.69	
Hay (purchase)			--	--	
Protein supplement			4,212	31.43	
Irrigated pasture			--	--	
Salt and mineral			355	2.65	
Concentrate feeds			--	--	
Veterinary and medicine			712	5.31	
Hired trucking			261	1.95	
Marketing			549	4.10	
Fuel and lubricants			1,392	10.39	
Repairs			1,450	10.82	
Land taxes			1,154	8.61	
Other taxes			206	1.54	
Insurance			570	4.25	
Interest on operating capital			896	6.69	
General farm overhead			989	7.38	
Other cash costs			--	--	
Hired labor			588	4.39	
Total cash costs			17,783	132.71	
Other Costs:					
Family labor			4,307	32.14	
Depreciation			3,678	27.45	
Interest on investment					
Other than land			8,127	60.65	
Interest on land			26,804	200.03	
Total other costs			42,916	320.27	
Total all costs			60,699	452.98	
Return above cash costs			16,307	121.69	
Return above cash costs and family labor					
			12,000	89.55	
Return to total investment			8,322	62.10	
Return to land			195	1.46	

Production Assumptions; Average herd 134 cows; 90 percent calf crop with pregnancy testing; 5 percent calf loss to weaning; 20 cows per bull; 25 percent heifer calves held for replacement; 4 percent cow loss; 22 percent dependent on wildlife refuge for annual feed.

Appendix Table 10 c. Costs and returns, beef cow enterprises with 200-299 head, Charles M. Russell National Wildlife Refuge.

Item	Unit	Number	Average weight	Price Cwt	Total Value
Sales:					
Steer calves	Head	94	430	71.23	28,791
Heifer calves	Head	40	410	62.82	10,302
Yearling steers	Head	--	--	--	--
Yearling heifers	Head	19	680	56.02	7,238
Cull cows	Head	27	950	36.99	9,488
Total					55,819
Total/cow					252.57
			Total Value	Value/Cow	
Cash costs:					
BLM grazing fee			301	1.36	
Wildlife Refuge			873	3.95	
Private range lease/rent			1,459	6.60	
State lease			123	.56	
Hay (produce)			4,474	20.24	
Hay (purchase)			2,105	9.52	
Protein supplement			1,789	8.10	
Irrigated pasture			--	--	
Salt and mineral			597	2.70	
Concentrate feeds			--	--	
Veterinary and medicine			1,059	4.79	
Hired trucking			298	1.35	
Marketing			373	1.69	
Fuel and lubricants			1,841	8.33	
Repairs			2,128	9.63	
Land taxes			1,843	8.34	
Other taxes			298	1.35	
Insurance			928	4.20	
Interest on operating capital			1,410	6.38	
General farm overhead			1,478	6.69	
Other cash costs			--	--	
Hired labor			2,060	9.32	
Total cash costs			25,437	115.10	
Other Costs:					
Family labor			7,585	34.32	
Depreciation			2,339	10.58	
Interest on investment					
Other than land			13,215	59.80	
Interest on land			39,338	178.00	
Total other costs			62,477	282.70	
Total all costs			87,914	397.80	
Return above cash costs			30,382	137.48	
Return above cash costs and family labor			22,797	103.15	
Return to total investment			20,458	92.57	
Return to land			7,243	32.77	

Production Assumptions: Average herd 221 cows; 90 percent calf crop with pregnancy testing; 5 percent calf loss to weaning; 20 cows per bull; 25 percent of heifer calves held for replacement; 4 percent cow loss; 17 percent dependent on wildlife refuge for annual feed.

Appendix Table 10 d. Costs and returns, beef cow enterprises with 300 head or more, Charles M. Russell National Wildlife Refuge.

Item	Unit	Number	Average weight	Price Cwt	Total Value
Sales:					
Steer calves	Head	400	430	71.23	122,516
Heifer calves	Head	166	410	62.82	42,755
Yearling steers	Head	--	--	--	--
Yearling heifers	Head	82	680	56.02	31,237
Cull cows	Head	115	950	36.99	40,412
Total					236,920
Total/cow					253.12
				Total Value	Value/Cow
Cash costs:					
BLM grazing fee				2,982	3.19
Wildlife Refuge				2,113	2.26
Private range lease/rent				6,665	7.12
State lease				561	.60
Hay (produce)				13,980	14.94
Hay (purchase)				6,416	6.85
Protein supplement				10,080	10.77
Irrigated pasture				--	--
Salt and mineral				2,527	2.70
Concentrate feeds				--	--
Veterinary and medicine				4,483	4.79
Hired trucking				1,264	1.35
Marketing				1,582	1.69
Fuel and lubricants				6,234	6.66
Repairs				6,243	6.67
Land taxes				8,518	9.10
Other taxes				1,320	1.41
Insurance				2,902	3.10
Interest on operating capital				4,754	5.08
General farm overhead				4,399	4.70
Other cash costs				--	--
Hired labor				7,582	8.10
Total cash costs				94,605	101.07
Other Costs:					
Family labor				24,800	26.50
Depreciation				24,026	25.67
Interest on investment					
Other than land				58,961	62.99
Interest on land				184,392	197.00
Total other costs				292,179	312.16
Total all costs				386,784	413.23
Return above cash costs				142,315	152.05
Return above cash costs and family labor				117,515	125.55
Return to total investment				93,489	99.88
Return to land				34,528	36.89

Production Assumptions: Average herd 936 cows; 90 percent calf crop with pregnancy testing; 5 percent calf loss to weaning; 20 cws per bull; 25 percent of heifer calves held for replacement; 9 percent dependent on wildlife refuge for annual feed.

Appendix Table 10e-Estimated annual reduction in selected inputs, costs,
and returns, from alternative livestock forage supplies,
Charles M. Russell National Wildlife Refuge

Item	Alternative Actions							
	Proposed Action		Intensive Wildlife		Multiple Use ^{1/}		No Grazing	
	1990	2005	1990	2005	1990	2005	1990	2005
	<u>Thousand Dollars</u>							
Gross income	347	352	725	641	249	79	567	1,122
Cash expenditures	85	86	178	158	61	19	140	276
Return above cash costs	262	266	547	483	188	60	427	846
	<u>Head</u>							
Cows	1,377	1,393	2,863	2,537	983	315	2,244	4,439
	<u>Man Years</u>							
Family labor	5.1	5.1	10.7	9.4	3.6	1.1	8.4	16.5
Hired labor	1.4	1.4	2.8	2.5	.9	.3	2.2	4.4
	<u>Percent</u>							
Reduction in forage	-33	-33	-67	-60	-26	-12	-54	-100

^{1/} There are 7,500 unallocated AUMs with this alternative. About one-half of these may be used by present Refuge users.

Appendix Table 10f-Effect of changes in forage supplies upon total cash
costs per cow, Charles M. Russell National Wildlife Refuge ^{1/}

Reduction in Refuge grazing (Percent)	Herd size			
	0-99	100-199	200-299	300 and over
	<u>Dollars/cow</u>			
No change	137.80	132.71	105.50	101.07
30	140.50	137.37	117.21	102.19
50	142.36	140.86	119.22	102.96
100	147.69	151.42	124.98	105.02

^{1/} See tables 1-4 for specific items included as cash costs.

Appendix 10

Appendix Table 10g-Distribution of producers by herd size and dependency on Refuge grazing

Dependency (percent)	0-99	100-199	200-299	300 and over	All sizes
<u>Percent of producers</u>					
0-10	17	26	42	43	36
11-20	38	21	26	38	34
21-30		32	16	8	14
31-50		16	11	11	10
51 and over	25	5	5		6
Total	100	100	100	100	100
<u>Percent of annual feed</u>					
Average dependency	13	22	17	9	13

Appendix Table 10h-Impact on return above cash costs of proposed action, by herd size and dependency

Herd size (head)	<u>Reduction in return above cash costs</u>			
	<u>Average producer</u>		<u>High dependency producers^{1/}</u>	
	<u>Dollars</u>	<u>Percent</u>	<u>Dollars</u>	<u>Percent</u>
0-99	385	6	<u>2/</u>	<u>2/</u>
100-199	1,700	10	2,300	14
200-299	4,200	13	7,800	24
300 and over	4,900	3	18,500	13

^{1/} Indicated reductions in return above cash costs assume 31 percent dependency. Since at high dependency producers are above this percentage, their losses of return above cash costs will exceed these values.

^{2/} High dependency producers have less than 12 cows and should not be seriously impacted by reductions.

Appendix Table 101-Impacts of incremental adjustments in forage, Charles Russell National Wildlife Refuge,
0-99 cows, average 56 head

Item	No Change	Percent Reductions						
		5	10	15	20	25	30	35
<u>Dollars</u>								
Gross income	13,675	13,582	13,507	13,414	13,321	13,247	13,154	13,061
Total cash costs	7,717	7,690	7,669	7,643	7,616	7,595	7,569	7,542
Value of family labor	2,185	2,170	2,158	2,144	2,129	2,117	2,102	2,087
Depreciation	1,665	1,663	1,662	1,660	1,658	1,656	1,654	1,652
Interest on investment other than land	3,504	3,483	3,466	3,444	3,423	3,406	3,385	3,363
Return above:								
Cash costs	5,958	5,892	5,838	5,771	5,705	5,652	5,585	5,519
Cash costs and family labor	3,773	3,722	3,680	3,627	3,576	3,535	3,483	3,432
Return to total investment	2,108	2,059	2,018	1,967	1,918	1,879	1,829	1,780
Return to land	-1,396	-1,424	-1,448	-1,477	-1,505	-1,527	-1,556	-1,583
Herd size	56.00	55.62	55.32	54.94	54.56	54.25	53.87	53.49
Family Labor	583	579	576	572	568	564	561	557
Hired Labor	37	37	37	36	36	36	36	36

Appendix 10

Appendix Table 101- (Continued)

Item	Percent Reductions			Percent Increases		
	40	45	50	5	10	15
	<u>Dollars</u>					
Gross income	12,986	12,893	12,819	13,720	13,720	13,720
Total cash costs	7,521	7,495	7,474	7,735	7,743	7,752
Value of family labor	2,075	2,060	2,048	2,192	2,193	2,193
Depreciation	1,650	1,648	1,647	1,666	1,666	1,666
Interest on investment other than land	3,346	3,325	3,308	3,514	3,515	3,515
Return above:						
Cash costs	5,465	5,398	5,345	5,985	5,977	5,968
Cash costs and family labor	3,390	3,338	3,297	3,793	3,784	3,775
Return to total investment	1,740	1,690	1,650	2,127	2,118	2,109
Return to land	-1,606	-1,635	-1,658	-1,387	-1,397	-1,406
Herd size	53.18	52.80	52.50	56.19	56.19	56.19
Family Labor	553	549	546	585	585	585
Hired Labor	35	35	35	37	37	37

Appendix 10

Appendix Table10 j-Impacts of incremental adjustments in forage, Charles Russell National Wildlife
Refuge, 100-199 cows, average 134 head

Item	No Change	Percent Reductions						
		5	10	15	20	25	30	35
<u>Dollars</u>								
Gross income	34,093	33,719	33,326	32,953	32,580	32,187	31,813	31,440
Total cash costs	17,783	17,684	17,580	17,481	17,382	17,277	17,178	17,079
Value of family labor	4,307	4,260	4,210	4,163	4,116	4,066	4,019	3,972
Depreciation	3,678	3,670	3,662	3,654	3,646	3,638	3,630	3,623
Interest on investment other than land	8,127	8,045	7,959	7,876	7,794	7,708	7,626	7,543
Return above:								
Cash costs	16,310	16,035	15,746	15,472	15,198	14,910	14,635	14,361
Cash costs and family labor	12,003	11,775	11,536	11,309	11,082	10,844	10,616	10,389
Return to total investment	8,325	8,105	7,874	7,655	7,436	7,206	6,986	6,766
Return to land	198	60	-85	-221	-358	-502	-640	-777
Herd size	134.01	132.54	130.99	129.53	128.06	126.51	125.05	123.58
Family Labor	1,148	1,136	1,123	1,110	1,097	1,084	1,072	1,059
Hired Labor	157	155	153	152	150	148	146	145

Appendix Table 10j-- (Continued)

Item	Percent Reductions			Percent Increases		
	40	45	50	5	10	15
	<u>Dollars</u>					
Gross income	31,047	30,674	30,301	34,466	34,859	35,232
Total cash costs	16,975	16,876	16,777	17,882	17,986	18,085
Value of family labor	3,922	3,875	3,828	4,354	4,404	4,451
Depreciation	3,615	3,607	3,599	3,686	3,694	3,702
Interest on investment other than land	7,457	7,375	7,293	8,210	8,296	8,378
Return above:						
Cash costs	14,072	13,798	13,524	16,584	16,873	17,147
Cash costs and family labor	10,150	9,923	9,696	12,230	12,469	12,696
Return to total investment	6,535	6,316	6,097	8,544	8,775	8,994
Return to land	-922	-1,059	-1,196	334	479	616
Herd size	122.04	120.57	119.10	135.47	137.02	138.49
Family Labor	1,046	1,033	1,021	1,161	1,174	1,186
Hired Labor	143	141	139	159	160	162

Appendix Table 10k -Impacts of incremental adjustments in forage, Charles Russell National Wildlife
Refuge, 200-299 cows, average 221 head

Item	No Change	Percent Reductions						
		5	10	15	20	25	30	35
Dollars								
Gross income	55,873	55,393	54,913	54,434	53,954	53,474	52,973	52,494
Total cash costs	23,316	25,194	25,073	24,952	24,830	24,709	24,582	24,461
Value of family labor	7,585	7,520	7,455	7,390	7,325	7,260	7,192	7,127
Depreciation	2,339	2,329	2,319	2,309	2,299	2,289	2,278	2,268
Interest on investment other than land	13,215	13,108	13,002	12,896	12,789	12,683	12,572	12,466
Return above:								
Cash costs	32,557	30,199	29,840	29,482	29,124	28,765	28,391	28,033
Cash costs and family labor	24,972	22,679	22,385	22,092	21,799	21,505	21,199	20,906
Return to total investment	22,633	20,350	20,066	19,783	19,500	19,216	18,921	18,638
Return to land	9,418	7,242	7,064	6,887	6,711	6,533	6,349	6,172
Herd size	221.21	219.31	217.41	215.51	213.61	211.71	209.73	207.83
Family Labor	2,023	2,005	1,988	1,971	1,953	1,936	1,918	1,900
Hired Labor	550	545	540	536	531	526	521	516

Appendix 10

Appendix Table 10k - (Continued)

Item	Percent Reductions			Percent Increases		
	40	45	50	5	10	15
	<u>Dollars</u>					
Gross income	52,014	51,534	51,054	56,353	56,833	57,312
Total cash costs	24,339	24,218	24,097	25,437	25,559	25,680
Value of family labor	7,061	6,996	6,931	7,650	7,716	7,781
Depreciation	2,258	2,248	2,238	2,349	2,359	2,369
Interest on investment other than land	12,359	12,253	12,146	13,321	13,428	13,534
Return above:						
Cash costs	27,675	27,316	26,957	30,916	31,274	31,632
Cash costs and family labor	20,614	20,320	20,026	23,266	23,558	23,851
Return to total investment	18,356	18,072	17,788	20,917	21,199	21,482
Return to land	5,997	5,819	5,642	7,596	7,771	7,948
Herd size	205.93	204.03	202.13	223.11	225.01	226.91
Family Labor	1,883	1,866	1,848	2,040	2,057	2,075
Hired Labor	512	507	502	554	559	564

Appendix 10

Appendix Table 10 1-Impacts of incremental adjustments in forage, Charles Russell National Wildlife Refuge,
300 or more cows, average 936 head

Item	No Change	Percent Reductions						
		5	10	15	20	25	30	35
<u>Dollars</u>								
Gross income	236,381	235,335	234,289	233,242	232,196	231,168	230,122	229,076
Total cash costs	94,605	94,354	94,103	93,852	93,602	93,355	93,104	92,853
Value of family labor	24,801	24,691	24,581	24,471	24,362	24,254	24,144	24,034
Depreciation	24,026	24,004	23,982	23,960	23,938	23,917	23,895	23,873
Interest on investment other than land	58,961	58,729	58,497	58,265	58,033	57,805	57,573	57,341
Return above:								
Cash costs	141,776	140,981	140,186	139,390	138,594	137,813	137,018	136,223
Cash costs and family labor	116,975	116,290	115,605	114,919	114,232	113,559	112,874	112,189
Return to total investment	92,949	92,286	91,623	90,959	90,294	89,642	88,979	88,316
Return to land	33,988	33,557	33,126	32,694	32,261	31,837	31,406	30,975
Herd size	935.87	931.73	927.59	923.45	919.30	915.23	911.09	906.95
Family Labor	6,617	6,587	6,558	6,529	6,499	6,471	6,441	6,412
Hired Labor	2,021	2,013	2,004	1,995	1,986	1,977	1,968	1,959

Appendix Table 101--(Continued)

Item	Percent Reductions			Percent Increases		
	40	45	50	5	10	15
	<u>Dollars</u>					
Gross income	228,030	226,983	225,937	237,428	238,474	239,520
Total cash costs	92,603	92,352	92,101	94,856	95,107	95,357
Value of family labor	23,924	23,815	23,705	24,910	25,020	25,130
Depreciation	23,851	23,829	23,807	24,048	24,070	24,092
Interest on investment other than land	57,109	56,877	56,645	59,193	59,425	59,657
Return above:						
Cash costs	135,427	134,631	133,836	142,572	143,367	144,163
Cash costs and family labor	111,503	110,816	110,131	117,662	118,347	119,033
Return to total investment	87,652	86,987	86,324	93,614	94,277	94,941
Return to land	30,543	30,110	29,679	34,421	34,852	35,284
Herd size	902.81	898.66	894.52	940.02	944.16	948.30
Family Labor	6,383	6,354	6,324	6,646	6,675	6,704
Hired Labor	1,950	1,941	1,932	2,030	2,039	2,048

Appendix 11. Income in the six-county region at Charles M. Russell National Wildlife Refuge, Montana, 1970 and 1975 (\$000's). 1/2/

Source of Labor	Fergus		Garfield		McGone		Petroleum		Phillips		Valley		Total	
	1970	1975	1970	1975	1970	1975	1970	1975	1970	1975	1970	1975	1970	1975
Labor and proprietors income	30,730	49,425	5934	9751	7951	18,418	2308	1060	16,707	24,433	38,064	63,835	101,694	166,922
Wages and salary disbursements	17,805	27,070	1814	2737	3348	6461	716	812	5529	9378	21,140	35,075	50,352	81,533
Other labor income	843	1609	90	93	200	449	20	23	269	556	1390	1943	2812	4673
Proprietors income	12,082	20,746	4030	6921	4403	11,508	1572	225	10,909	14,499	15,534	26,817	48,530	80,716
farm	8626	15,216	3742	6297	3608	10,135	1442	-133	9611	14,338	11,800	20,932	38,829	64,785
nonfarm	3456	5530	288	624	795	1373	130	358	1298	2161	3734	5885	9701	15,931
By industry														
farm	9638	16,722	4277	7093	4319	11,196	1650	178	10,376	13,478	12,699	22,267	42,959	70,934
nonfarm	21,092	32,703	1657	2658	3632	7222	658	882	6331	10,955	25,365	41,568	58,735	95,988
private	15,413	24,190	867	1388	2759	5737	350	492	4243	7274	18,619	31,361	42,251	70,442
manufacturing	1060	2285	(D)	(D)	(D)	(D)	(D)	(L)	170	529	5032	(D)	(D)	(D)
mining	(D)	(D)	(D)	(D)	(L)	(D)	(L)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
contract construction	2308	5397	(D)	114	258	834	(D)	61	254	395	2306	6096	(D)	12,897
wholesale and retail trade	5008	6992	416	680	915	1701	100	199	1690	2854	4671	7973	12,800	20,399
finance, insurance and real estate	1012	1389	(D)	117	(D)	(D)	(L)	(L)	185	378	1003	1314	(D)	(D)
transportation, communications and public utilities	1709	2324	(L)	(D)	(D)	1896	0	0	793	1279	2581	4277	(D)	(D)
services	3767	4957	112	262	350	790	(D)	57	971	1529	2762	9914	(D)	17,509
other industries	(D)	(D)	(L)	50	(D)	(D)	(L)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
government	5679	8513	790	1270	873	1485	308	390	2088	3681	6746	10,207	16,404	25,546
federal, civilian	1639	2140	97	118	134	206	58	49	716	1241	2497	3595	5141	7349
federal, military	902	903	25	35	40	59	48	46	76	118	1302	1277	2191	2438
state and local	3138	5470	668	1117	699	1220	292	295	1296	2322	2947	5355	8950	15,759
Personal income by place of residence ^{3/}	43,758	70,931	7182	12,110	9698	21,853	2532	1682	21,454	33,336	46,070	78,072	130,694	217,984
Per capita income	3,452	5,515	3,977	7,738	3,358	8,142	3,729	2,552	3,963	6,112	3,995	5,867	3,838	5,981

1/ Current income from all sources measured after deduction of personal contributions to Social Security, government retirement and other social insurance programs but before deduction of income and other personal taxes.

2/ Source: Montana Department of Community Affairs (1978).

3/ Source: U.S. Department of Commerce (1970, 1975).

(D)-Not shown to avoid disclosure of confidential information, data included in totals. (L)-less than \$50,000, data included in totals.

Appendix 12. Number of persons 14 years or older employed in the six-county region of Charles M. Russell National Wildlife Refuge, Montana, 1960 and 1970.^{1/}

Employment category	Fergus		Garfield		McCone		Petroleum		Phillips		Valley		Total	
	1960	1970	1960	1970	1960	1970	1960	1970	1960	1970	1960	1970	1960	1970
Industry														
agriculture, forestry, fisheries	1466	1099	490	341	631	478	222	155	924	702	963	903	4696	3678
mining, construction	443	211	35	70	110	20	15	17	132	83	918	243	1653	644
manufacturing	239	229	8	18	49	6	14	0	41	32	114	462	465	747
transportation, communication, other utilities	234	215	15	18	26	50	7	7	171	58	410	316	863	664
wholesale, retail trade	981	1098	60	80	97	221	33	8	316	414	1021	703	2508	2524
finance, insurance, real estate	160	184	7	14	9	24	0	0	46	51	141	108	363	381
business, repair services	108	66	19	26	18	16	5	0	65	23	48	56	263	187
personal services	236	192	30	15	39	28	23	10	125	87	317	170	770	502
entertainment, recreation services	17	41	4	0	4	8	0	0	8	9	40	24	73	82
professional, related services	659	648	69	88	131	106	34	25	209	281	533	697	1635	1845
public administration	244	283	45	34	50	46	14	39	91	97	380	257	824	756
Industry not reported	151	115	0	14	3	47	0	0	150	142	86	184	390	502
Occupation														
professional, technical, kindred	577	529	45	79	110	87	28	19	162	254	481	510	1403	1478
managers, administrators	444	519	41	56	74	83	15	25	170	163	531	388	1275	1234
sales workers	309	363	14	15	21	51	14	0	103	110	292	197	753	736
clerical, kindred	373	438	42	49	55	84	8	27	224	121	515	451	1217	1170
craftsmen, foremen, kindred	528	402	33	43	87	82	27	17	150	195	812	391	1646	1130
operative, kindred	330	274	36	55	77	50	8	0	136	97	473	404	1060	880
laborers (nonfarm)	195	124	3	19	23	4	4	3	71	19	284	180	580	349
farmers, farm managers	1065	748	348	204	551	391	147	88	596	475	758	648	3465	2554
farm laborers, foremen	333	303	142	121	75	78	75	67	307	203	137	245	1069	1017
service workers (nonhousehold)	468	531	70	40	83	81	20	11	175	183	426	510	1242	1356
private household workers	81	40	8	10	4	7	16	4	34	17	150	19	293	97
occupation not reported	235	110	0	27	7	52	5	0	150	142	103	180	500	511
Total employment ^{2/}	4938	4381	782	718	1167	1050	367	261	2278	1979	4971	4123	14,503	12,512

1/ Montana Department of Community Affairs (1978).

2/ Totals are the same for industry and occupation groups.

Appendix 13. Estimation of indirect economic impacts.

Introduction

An interindustry model is used to identify the interdependent structure of the local economy surrounding the Charles M. Russell National Wildlife Refuge. The interindustry model, commonly called an input-output model, is used to measure the structural interdependence among producing sectors within the region. The input-output technique shows what changes in one sector (livestock) will have on activities in the other sectors.

The model is governed by what are termed final demands. Changes in the production by basic industries which export goods and services to customers from outside the study region determine the level of economic activity within the region. Thus, changes in the export of livestock and changes in the sale of goods and services to tourists constitute changes in final demand. The primary purpose of the input-output technique is to trace the direct and indirect impacts of such changes in final demand throughout the local economy. A more detailed description of the input-output technique can be found in Richardson (1972).

Procedures Followed

The input-output method of analysis results in the calculation of "multipliers" which can be applied to projected changes in exports by a given industry in order to calculate the direct plus indirect economic impacts on a regional economy. Total sales, personal income, and employment are among the set of important impacts which may be calculated through the use of input-output multipliers.

Two major direct effects are foreseen as a result of the proposed alternative. One direct impact is on the level of livestock production in the study region. This economic impact has been reviewed through the use of linear programming analysis and is reported elsewhere in this report. The second direct impact is in the level of tourist activity in the study region. The changes in tourist visitation predicted in the Draft EIS are retained, but new estimates of purchases in the study region by tourists are used to calculate changes in sales to tourists.

Once the direct changes in business activity in the livestock and tourist industries have been estimated, input-output multipliers are used to find the total (direct plus indirect) impacts on the local economy.

Selection of Appropriate Multipliers

The construction of an input-output model is a time-consuming and expensive process. Neither time nor available finances would allow development of a model specific to the study region. No models presently exist specifically of the study region,¹ although some models are under development which might be used in the future. Multipliers for the livestock

¹ The Forest Service I-O model based upon secondary data as used in the previous Draft EIS is not currently available. An economic base model is currently under construction, but is unavailable at this time.

Appendix 13. (Cont'd.)

sector and for sectors most affected by tourist spending have been taken from a recent study conducted in Colorado near Kremmling. The Kremmling study is for a relatively isolated and small regional economy in Colorado. It is the most recent survey-based input-output model available to the researchers for this report. Since it was developed by researchers, it has the added advantage of familiarity with the details of its construction. Appendix Table 13a presents a distribution of employment by industry in the CMR study region and the Kremmling for comparison. It may be noted that the absolute size of the local economy in the Kremmling model is smaller than in the CMR study region. Generally, the estimated indirect impacts will increase as the size and self-sufficiency of the region is increased. Thus, the multipliers taken from the Kremmling study may slightly understate the total impacts on the CMR study region. Such a generalization may not always apply, however, since some industries may benefit from the lack of competing suppliers due to the geographic isolation of a region. Alternative livestock industry input-output multipliers can be found in Bartlett, Taylor, and McKean.²

A unique sector is seldom available for the tourist industry. This does not present a significant problem, however, since a weighted multiplier is easily calculated. The recent survey of tourists in Wyoming³ (1979), identified ten sectors or industry groups selling to tourists. The large sample size of 2,766 and the fact that the survey is very current and in a neighboring state, make this data most appropriate for weighting the multipliers. Multipliers taken from the Kremmling study are aggregated using spending shares from the Wyoming tourist survey. These calculations are presented in Appendix Table 13b. A weighted business multiplier and weighted employment multiplier are calculated for tourist spending.

It should be noted that a Type II multiplier was used to estimate the total impacts of changes in livestock production, while a Type I multiplier was used in conjunction with the tourist spending estimates. A Type II multiplier for livestock is appropriate given that virtually all livestock production is exported from the study region, and maximum expected impact measurement is desired. To the extent that households do not respond a fixed proportion of their incomes inside the study region, the Type II multiplier could overstate the total impact.

A Type I multiplier was used for the tourist impact measurement because it was not possible to identify tourist exports. Rather, total spending by households, both local and export, was multiplied by the Type I multiplier. Because of a lack of export data, it was necessary to assume that households are exogenous when estimating tourism impacts. With this assumption, total household spending rather than only export spending could be utilized in the impact measurement. A smaller multiplier was thus applied to the larger tourist spending estimates. Appendix Tables 13c-e show total or direct plus indirect effects of the management alternatives on sales and employment.

² Taken from: Impacts of Federal Grazing on the Economy of Colorado, by E.T. Bartlett, R.G. Taylor, and John McKean, Contract Report, U.S. Forest Service, Bureau of Land Management and Colorado State Experiment Station.

³ The Wyoming Travel/Tourism Industry, Industrial Development Division, Department of Economic Planning and Development, July 1980.

Appendix 13. (Cont'd.)

Summary of Findings

Total regional impacts of change in livestock production caused by the management alternatives are shown in Appendix Table 13c. Total impacts of change in tourism caused by the management alternatives are shown in Appendix Table 13d. Appendix Table 13e shows the combined impacts from changes in livestock production and tourism for each of the management alternatives.

Appendix 13

Appendix Table 13a.
Distribution of Employment by Sector, Kremmling Region, C.M. Russell Region

Sector Description	SIC Codes	Kremmling Employment ¹	C.M. Russell Employment ²
Ag/Livestock	01, 02, 07	81	29-73
Mining	12, 13	111	19-52
Construction	14-17	215	308-326
Manufacturing	20-39	267	389-425
Transport, Comm., Public Utilities	40-49	125	318-415
Wholesale	50, 51	809	575-654
Retail	52-59		1741
Finance, Insurance, Real Estate	60-69	152	372-469
Services	70-89 exclu. 82	925	1,629-1,647
Totals		2,685 ⁴	5,552 ⁴

¹Source: An Input-Output Model of the Kremmling Region of Western Colorado, Contract Report, Bureau of Land Management, Economic Department, Colorado State University, Fort Collins, Colorado, John R. McKean and Joseph Wever, 1980.

²Federal disclosure law requires presentation of ranges rather than actual employment numbers in certain counties with small numbers of firms.

³Source: County Business Patterns--MONTANA, Table 2. Counties--Employees, Payroll, and Establishments, by Industry, 1977.

⁴Excludes employment in educational services and government.

Appendix 13

Appendix Table 13b

Estimation of Weighted Average Multipliers for Tourist Spending for All Recreation Activities

Industry	Spending Per Person ¹	Percent	Business Mult. ^{2,3}	Employment Mult. ²
Lodging Places	\$5.18	16.88	2.58	.865 x 10 ⁻⁴
Eating & Drinking Places	5.15	16.79	1.73	.562 x 10 ⁻⁴
Auto Service	0.97	3.16	1.52	.167 x 10 ⁻⁴
Gasoline	5.75	18.74	1.52	.167 x 10 ⁻⁴
Food Stores	3.19	10.40	1.42	.160 x 10 ⁻⁴
Apparel Stores	3.02	9.84	1.42	.160 x 10 ⁻⁴
Dept. & Variety	1.08	3.52	1.42	.160 x 10 ⁻⁴
Amusement Places	3.25	10.59	1.90	.352 x 10 ⁻⁴
Drugs, Liquor & Sporting Goods	1.82	5.93	1.42	.160 x 10 ⁻⁴
Miscellaneous ⁴	1.27	4.15	2.14	.522 x 10 ⁻⁴
TOTAL	30.68	100.00	1.77	.383 x 10 ⁻⁴
			Weighted Business Multiplier	Weighted Employment Multiplier

¹Source: The Wyoming Travel/Tourism Industry, Industrial Development Division, Department of Economic Planning and Development, July 1980.

²Source: An input-Output Model of the Kremmling Region of Western Colorado, Contract Report, Bureau of Land Management, Economics Department, Colorado State University, Fort Collins, Colorado, John R. McKean and Joseph Weber, 1980.

³A Type I business and employment multiplier is used because the portion of tourist visits from outside the study region is unknown. A Type I multiplier includes households in the exogenous part of the input-output model. The Type I multiplier is smaller than the Type II multiplier but it is the appropriate measure when exports to tourists cannot be separated from local consumer spending. In effect, a smaller multiplier is being applied to a larger change in spending than would be the case with a Type II multiplier on exports.

⁴Assumed to be other services.

Appendix
Table 13c Direct Plus Indirect Impacts of Change in Livestock Production on Sales and Employment.

Management Alternatives		Change in Sales from Current Use to Alternative Actions	Input-Output Business Multiplier ²	Direct Plus Indirect Change in Local Sales	Input-Output Employment Multiplier ²	Direct plus Indirect Change in Local Employment
Proposed Action	1985 2000	\$ -347,000 -352,000	2.67 2.67	\$ -926,490 -939,840	.379 x 10 ⁻⁴ .379 x 10 ⁻⁴	-13 -13
Intensive Wildlife Management	1985 2000	-725,000 -641,000	2.67 2.67	-1,935,750 -1,711,470	.379 x 10 ⁻⁴ .379 x 10 ⁻⁴	-27 -24
Multiple Use	1985 2000	-249,000 -79,000	2.67 2.67	-664,830 -210,930	.379 x 10 ⁻⁴ .379 x 10 ⁻⁴	-9 -3
No Grazing	1985 2000	-567,000 -1,122,000	2.67 2.67	-1,513,890 -2,995,740	.379 x 10 ⁻⁴ .379 x 10 ⁻⁴	-21 -43

¹Source: Linear Programming Analysis conducted in this study.

²A Type II multiplier which includes households (labor) as part of the interdependent local economy is applies to changes in livestock industry sales. The assumption that households respond part of their incomes in the local economy and that all of livestock output is exported out of the six county study region provides an upper bound on local impacts.

Appendix 13

Appendix
Table 13 Indirect Plus Impacts of Change in Tourist Visits on Sales and Employment.

Management Alternatives	1985 \$ 2000	Change in Sales from Current Use to Alternative Actions ¹	Input-Output Weighted Multiplier ²	Direct Plus Indirect Change in Local Sales	Input-Output Weighted Employment Multiplier ²	Direct Plus Indirect Change in Local Employment
Proposed Action	1985 \$ 2000	+92,040 +276,120	1.77 1.77	\$ +162,911 +488,520	.383 x 10 ⁻⁴ .383 x 10 ⁻⁴	+ 4 +11
Intensive Wildlife Management	1985 2000	-92,040 -613,600	1.77 1.77	-162,911 -1,086,072	.383 x 10 ⁻⁴ .383 x 10 ⁻⁴	- 4 -24
Multiple Use	1985 2000	+368,160 +1,043,120	1.77 1.77	+651,643 +1,846,322	.383 x 10 ⁻⁴ .383 x 10 ⁻⁴	+14 +40
No Grazing	1985 2000	+153,400 +337,480	1.77 1.77	+271,518 +597,340	.383 x 10 ⁻⁴ .383 x 10 ⁻⁴	+ 6 +13

¹Source: Visitor days presented in Appendix Table 17-A in C.M. Russell National Wildlife Refuge Draft E.I.S. Table 17-A, Appendix. Estimated by subtracting visitor days for "no action" from visitor days for the various management alternatives and multiplying the differences by \$30.68. The latter figure is the estimate of daily per person expenditures reported earlier from the Wyoming tourism study.

²Source: Weighted average of multiples for goods purchased by tourists. See text and Table 3.

Appendix 13

Appendix
Table 13e Total Impacts of Change in Livestock Production and Tourism.

Management Alternatives		Total Change in Sales	Total Change in Employment
Proposed Action	1985	\$ -763,579	- 9
	2000	-451,320	- 2
Intensive Wildlife Management	1985	-2,098,661	-31
	2000	-2,797,542	-48
Multiple Use	1985	+13,187	+ 5
	2000	+1,635,392	+57
No Grazing	1985	-1,242,372	-15
	2000	-2,398,400	-50

Source: Calculated from data shown on Tables 3 and 4.

Appendix 14. Summary comparison of important wildlife habitat conditions for the present situation and five management alternatives on the Charles M. Russell National Wildlife Refuge, Montana.

	Present situation		No Action		Proposed Action		Intensive Wild- life Management		Multiple Use		No Grazing	
	1978		1985	2000	1985	2000	1985	2000	1985	2000	1985	2000
Sharp-tailed grouse												
overall value*	4.6		4.6	4.7	5.8	7.2	6.8	8.0	4.8	5.3	6.8	8.6
residual cover	4.4		4.4	4.5	5.5	7.0	6.7	8.4	4.6	5.1	6.8	8.8
shrub crown cover	4.6		4.6	4.6	5.7	7.1	6.7	8.2	4.8	5.3	6.4	8.2
quality of shrubs	5.4		5.4	5.5	6.3	7.3	6.5	8.0	5.7	6.2	6.9	8.9
understory quality	6.4		6.4	6.4	6.8	7.4	6.9	7.6	6.7	7.4	7.1	8.1
Mule deer												
overall value	5.0		5.6	5.8	6.8	7.2	7.3	8.0	5.9	6.5	7.0	7.5
quantity winter browse	4.9		4.9	4.9	6.1	7.1	7.1	8.6	5.1	5.6	6.6	7.7
quality winter browse	5.9		5.9	5.9	7.4	7.6	7.7	8.5	6.2	6.8	7.5	8.0
forb quality	5.5		5.5	5.7	6.9	7.4	7.5	7.9	5.7	6.3	6.9	8.1
deciduous shrub	5.2		5.2	5.4	6.5	7.2	7.1	7.6	5.4	6.0	6.8	6.9
topography	6.2		6.2	6.3	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
Pronghorns												
overall value	5.1		5.2	5.3	6.5	7.4	6.6	7.1	6.0	6.6	5.9	6.3
mixture shrub & grass	4.7		4.7	4.8	5.9	7.1	6.3	7.0	5.2	5.7	5.0	5.6
forb quality	5.6		5.6	5.6	7.0	7.4	7.0	7.3	6.3	6.9	6.0	6.6
silver sage	4.8		4.8	4.8	6.0	6.8	5.9	6.6	5.8	6.4	5.5	6.2
big sage-quantity	5.2		5.2	5.2	6.5	7.0	6.2	6.8	5.5	6.1	5.5	6.0
big sage-height	7.6		7.6	7.6	7.6	7.7	7.5	7.7	6.2	6.3	6.1	6.0
topography	7.3		7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
White-tailed deer												
overall value	5.4		5.4	5.6	6.5	7.4	7.0	8.1	5.7	6.9	6.8	7.9
overstory density	7.0		7.0	7.0	7.0	7.0	7.0	7.2	7.0	7.0	7.0	7.0
understory density	5.4		5.4	5.5	6.5	7.0	7.3	7.8	6.2	6.6	7.0	8.0
browse availability	4.6		4.6	4.8	5.6	7.4	6.2	7.6	5.4	7.0	6.0	7.4
openings	7.1		7.1	7.1	6.7	7.4	7.1	7.3	6.9	7.4	7.1	7.4
Elk												
overall value	6.0		6.0	6.2	7.0	7.6	7.5	8.0	6.1	6.4	7.0	7.8
coulee availability	6.5		6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
juniper cover	6.7		6.7	6.7	6.8	7.4	7.0	8.0	6.7	6.7	6.8	7.4
topography	7.8		7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
feeding sites	5.5		5.5	5.8	6.6	7.2	6.9	7.4	6.0	6.2	7.0	7.7
water availability	8.4		8.4	8.4	8.4	8.5	8.6	8.6	9.2	9.3	8.4	8.4
Waterfowl												
overall value	3.4		3.4	3.4	4.2	7.0	7.0	9.0	4.5	7.5	6.0	8.3
pond size	3.9		3.9	3.9	4.0	4.2	6.9	7.8	6.9	7.8	4.0	4.2
submergent aquatics	3.2		3.2	3.2	4.6	6.0	6.7	8.0	4.6	6.0	4.6	6.3
emergents	3.0		3.0	3.0	3.8	7.0	7.0	9.0	3.7	6.9	6.0	8.0
upland vegetation	3.8		3.8	3.8	4.4	7.0	7.1	9.2	4.2	6.7	6.9	8.0
goose nesting sites	3.8		3.8	3.8	4.0	6.9	6.0	7.6	4.5	6.0	4.0	6.9

Endangered species introductions	no	no	yes	yes	yes	yes	yes	yes	yes
peregrine falcons	migrant only	no	?	yes	?	yes	?	yes	yes
black-footed ferrets	migrant only	migrant only	migrant	?	?	yes	migrant only	migrant only	migrant only
Unique species Introductions or occurrence									
prairie dogs									
(probable acres occupied)	6000	6600	7500	10,000	6000	7000	15,000	6000	5000
swift fox	no	no	no	yes	yes	yes	yes	no	yes
burrowing owls	yes	yes	yes	yes	yes	yes	yes	yes	yes
mountain plovers	yes	yes	yes	yes	yes	yes	yes	yes	yes
ferruginous hawks	yes	yes	yes	yes	yes	yes	yes	yes	yes
prairie falcons	yes	yes	yes	yes	yes	yes	yes	yes	yes
Proposed introduction									
sites for bighorn sheep	Two Calf Creek	Two Calf Creek, Mickey-Brandon Buttes	Two Calf Creek, Mickey-Brandon Buttes	Two Calf Creek, Mickey-Brandon Buttes	Two Calf Creek, Mickey-Brandon Buttes, Larb Hills, Billy Creek, Seven~Wolf Coulee, Widow Coulee	Two Calf Creek, Mickey-Brandon Buttes, Wolf Coulee	Two Calf Creek, Mickey-Brandon Buttes, Larb Hills		

1/ 0.0-2.5 = poor, 2.6-5.0 = fair, 5.7-7.5 = good and 7.6-10.0 = excellent.

*Biological judgment and not a numerical average. See Appendix 2 for explanation.

Appendix 15. Methodology employed in calculation of AUMs on Charles M. Russell National Wildlife Refuge.

Summary

Forage allocation on the refuge consisted of four major steps.

Step I

A standard SCS Range Site and Condition Survey was completed on the refuge. This survey gave the beginning AUM recommendation.

Step II

Mackie's work (1970) provided the basis for this step. Using a slope/water matrix developed from livestock observations, availability coefficients were computed and applied to AUM recommendations derived from SCS stocking guides in Step I. This provided for proper use of vegetation by livestock on those areas actually grazed instead of assuming even livestock distribution over the whole area. Reduction of AUMs in this step comprised the largest percentage of the overall reduction.

Step III

Erosion potential on certain soil types eliminated AUM recommendations on those sites. These reductions were in addition to those in Step II.

Step IV

Evaluation of AUMs available after Step II in relation to various wildlife objectives was the final step of the forage allocation process. Small reductions, based on Habitat Evaluation Procedures, were made to ensure forage for big game or residual cover for other wildlife species on a site specific basis.

The following is a hypothetical example of Step I through Step IV on a single refuge section.

<u>Section Six</u>		<u>AUMs Available to Livestock</u>	
Step I	Range Site and Condition Survey		
	Range Site A, excellent condition	50	
	Range Site B, good condition	30	
	Range Site C, fair condition	20	
	subtotal	100	total 100
Step II	Slope/water matrix		
	Range Site A	-20	
	Range Site B	-15	
	Range Site C	-15	
	subtotal	-50	total 50

Appendix 15. (Cont'd.)

Step III Erosion hazards

Range Site A	-0	
Range Site B	-7	
Range Site C	<u>-0</u>	
subtotal	-7	total 43

Step IV Wildlife objectives

Range Site A	-5	
Range Site B	-0	
Range Site C	<u>-0</u>	
subtotal	-5	total 38

AUMs available to livestock on section six total 38.

Detailed Analysis

The AUMs derived from the standard SCS range site and condition survey (see Appendix 8) were considered as a beginning level and the first step in allocation of forage on the refuge.

Mackie's work (1970) on mule deer, elk, and cattle interrelationships provided much of the basis for allocating forage to wildlife and livestock on the refuge. The study took place on lands included within or bordering the refuge on its southwest boundary during 1960-64. Observations of elk, deer, and cattle were made during all four seasons throughout the study period by activity such as feeding, bedding, or loafing, standing alert or traveling, occurrence on various habitat types, slopes, exposures, distances from water, and locations when first seen. A total of 11,581 observations of mule deer, 3,489 of elk and 25,107 of cattle were recorded during the study. Additionally, a similar study was made by Knowles (1975) on the north side of the Missouri River in the Nichols Coulee area and provides additional supportive information.

Information obtained by Mackie and Knowles was used to determine primary use areas for livestock and develop slope and water criteria. These criteria were used to make adjustments to the interim AUM level derived from the recommended stocking rates provided in SCS stocking guides. The objective in making slope and water adjustments was to provide a basis for stocking key livestock areas at a proper stocking rate. This would mean that more inaccessible areas which are seldom grazed by livestock would not be allocated on an across-the-board stocking rate basis in accordance with the grazing guides. Such a situation appears to have prevailed during the 1952-53 range survey, which set stocking rates maintained to the present time.

Primary livestock areas according to Mackie would include extensive, unbroken ridgetops and broad coulee bottoms within a mile of dependable water. Primary mule deer areas included moderate to steep slopes in the ponderosa pine-juniper habitat type and the big sage-bluebunch wheatgrass habitat type on smaller ridgetops and along margins

Appendix 15. (Cont'd.)

of more extensive ridges. Small to moderately extensive ridgetops dominated by the latter type in areas of light cattle use were apparent primary range areas for elk. Unlike cattle, Mackie felt that deer and elk were somewhat slope and water independent and that essentially all the wildlife refuge was available for their use. R. Ross (personal communication) indicated that large coulee bottoms and extensive ridgetops were primary livestock areas with the rougher, broken country better suited for wildlife.

Mackie's work provided that, "Management programs, numbers, and management of livestock should be considered on the basis of forage available on primary range areas rather than on types of the entire area." In recognition of this statement, a slope-water matrix for livestock was developed using Mackie's criteria as the basis for allocating forage to livestock. Livestock would be allocated forage based upon recorded on-site observations of use and distribution. This would result in a proper stocking rate for the primary areas where cattle tend to congregate. A maximum livestock stocking rate was therefore determined using the slope-water criteria provided in Mackie's study. CMR was created for the primary benefit of wildlife with excess forage to be allocated to livestock. All AUMs within a section recommended by the SCS stocking guides may be made available for wildlife if key or critical habitat is present to justify such an allocation. Conversely, all the AUMs may be allocated to livestock if there are no wildlife needs.

The slope-water matrix is provided in Appendix Table 15a. Slope and water criteria are based upon actual observations of livestock during Mackie's study. The basis for the availability coefficient was determined with J. Nelson (personal communication). Nelson verified that the slope-water matrix was a reasonable model from which to derive information. Mackie reported that 82 percent of his total livestock observations were on slopes of 0-10 degrees, 13 percent 11-25 degrees, 4 percent 25-36 degrees and trace amounts over 35 degrees. His breakdowns by distance from water were:

Distance	Percent observations
0 - 1/4	37
1/4 - 1/2	22
1/2 - 3/4	20
3/4 - 1	11
1 - 2	10

A total of 90 percent of all observations of livestock was within one mile or less of water.

Availability coefficients were then determined by slope and water observation percentages for each slope category and distance factor for livestock. For example, slopes of 0-10 degrees were considered non-limiting for livestock, as were distances of 0-1/4 miles from water. The availability coefficient would be 1.00 or 100 percent of the total AUMs available to livestock. Since 82 percent of all observations were on slopes of 0-10 degrees, 18 percent would have occurred on slopes of greater than 11 degrees. Although 13 percent of the observations occurred on slopes of 11-25 degrees, the figure used for the 11-25 degree

Appendix 15. (Cont'd.)

Appendix Table 15a. Slope-water matrix for livestock on the Charles M. Russell National Wildlife Refuge, Montana.

Degree of slope	Slope coefficient	Distance to water (miles)	Water coefficient	Availability coefficient
0 - 10	1.0	0 - $\frac{1}{4}$	1.0	1.0
11 - 25	0.18	0 - $\frac{1}{4}$	1.0	0.18
26 - 35	0.05	0 - $\frac{1}{4}$	1.0	0.05
35 +	0.01	0 - $\frac{1}{4}$	1.0	0.01
0 - 10	1.0	$\frac{1}{4}$ - $\frac{1}{2}$	0.63	0.63
11 - 25	0.18	$\frac{1}{4}$ - $\frac{1}{2}$	0.63	0.11
26 - 35	0.05	$\frac{1}{4}$ - $\frac{1}{2}$	0.63	0.03
35 +	0.01	$\frac{1}{4}$ - $\frac{1}{2}$	0.63	0.01
0 - 10	1.0	$\frac{1}{2}$ - $\frac{3}{4}$	0.41	0.41
11 - 25	0.18	$\frac{1}{2}$ - $\frac{3}{4}$	0.41	0.07
26 - 35	0.05	$\frac{1}{2}$ - $\frac{3}{4}$	0.41	0.02
35 +	0.01	$\frac{1}{2}$ - $\frac{3}{4}$	0.41	unsuitable
0 - 10	1.0	$\frac{3}{4}$ - 1	0.21	0.21
11 - 25	0.18	$\frac{3}{4}$ - 1	0.21	0.04
26 - 35	0.05	$\frac{3}{4}$ - 1	0.21	0.01
35 +	0.01	$\frac{3}{4}$ - 1	0.21	unsuitable
0 - 10	1.0	1 - 2	0.10	0.10
11 - 25	0.18	1 - 2	0.10	0.02
26 - 35	0.05	1 - 2	0.10	unsuitable
35 +	0.01	1 - 2	0.10	unsuitable

Appendix 15. (Cont'd.)

category was 0.18; 18 percent of the total observations occurred on slopes steeper than 11 degrees, and it was concluded that 5 percent differential use on slopes of 26-35+ degrees could just as likely occur on the 11-25 degree slopes.

Slope gradients for each section were determined by means of aerial photo interpretation and use of topographic maps with contour intervals. Slope gradients for each category on the slope-water matrix were measured and determined for each range site and tallied with water criteria to get acreages by each slope and water class. The availability coefficient (see Appendix Table 15a) was then applied to the interim AUM figure derived from the range site and condition survey for each particular range site. This process determined a maximum recommended livestock stocking guide based upon the slope-water matrix.

Distances to known water sources were obtained from questionnaires received from livestock permittees, information provided by FWS field personnel, and locations of wells, ponds, and springs shown on topographic maps and range survey aerial photos. Named creeks appearing on Geological Survey topographic maps as either permanent or seasonal streams were considered to be reliable water sources unless information provided by field personnel indicated that the source was not utilized by livestock.

In examining range sites which would be considered to be key cattle areas, the following sites would be most important in terms of forage production and suitability:

1. overflow
2. sandy
3. silty
4. clay
5. thin hilly (0-10 degree slopes)
6. shallow clay (0-10 degree slopes)
7. panspots
8. dense clay

Present key deer and elk use areas would include the following sites:

1. clay (areas of light cattle use)
2. thin hilly
3. shallow clay
4. panspots (areas of light cattle use)
5. dense clay (areas of light cattle use)
6. shallow clay-shale complex
7. thin breaks
8. shale

Areas which may assume key importance for pronghorns, elk, and deer for short periods may include:

1. saline lowland (emergency food)
2. thin breaks (security cover)
3. saline upland (emergency food)
4. badlands (security cover)

Appendix 15. (Cont'd.)

An attempt to quantify all criteria influencing distribution and use of forage by livestock and wildlife in terms of a mathematical equation is not easy. Other factors such as age class and breed of cattle may affect distribution patterns considerably. Yearlings are especially prone to be more slope and water independent than mature animals. Season of use may affect distribution patterns somewhat with animals tending to concentrate near water in hot weather and to range further from water during cooler fall weather. Information in present range publications indicates that the slope-water criteria presented above is comparable with data from other areas. The Forest Service (1964) indicated studies in the Stansbury Mountains in Utah revealed that most of the range classed as suitable was on slopes of 5-18 percent. Julander and Jeffrey (1964) found that cattle in Utah made little use of slopes greater than 30 percent, restricting most of their use to slopes of less than 10 percent. In Montana, Mueggler (1965) found that areas 200 yards up 30 or 60 percent slopes are occupied only 20 and 11 percent respectively as much as areas at the bottom. Slopes greater than 50 percent are generally considered unsuitable for livestock grazing (Bureau of Land Management 1976).

In regard to water, Skovlin (1965) indicated that cattle will seldom graze more than 1/2 mile from water where slopes are in excess of 40 percent. The Forest Service agrees that cattle should not be forced to go over 1/2 mile from water in rough terrain or forced to go more than 2½ miles even on level terrain. Skovlin indicated cattle could travel up to 3 miles for water on gentle ground but would not be found that far away in summertime unless forage was gone for some distance about the water supply.

Soils limitations in the form of insufficient vegetation or erosive hazard provided a final consideration for AUM allocations. W. Larsen (personal communication) revealed certain soils mapping units which should be excluded from grazing. These mapping units were excluded from the AUM allocations during final compilations.

The fourth and final step in livestock AUM calculation was reviewing AUM recommendations to this point in light of the area's wildlife objectives. Where Habitat Evaluation Procedures data (see Appendix 2) suggested an additional need, further reductions were made for big game forage or residual cover for sharp-tailed grouse and other wildlife species.

In the final analysis it must be remembered that the range site and condition inventory as presented in the SCS National Range Handbook is primarily a livestock-oriented inventory tool. As such, it has limitations when applied to wildlife needs. Animals such as elk, which have diets similar to cattle, can be considered along the same basic lines when it comes to allocating forage. Other needs such as security cover and interspersed habitat needs are not so clear cut nor are the needs of deer and pronghorns or other less obvious wildlife species. However, it serves an important function as a management tool because it expresses present vegetation in terms of its potential climax. By examining what is present on the site and knowing wildlife needs for that site, a decision can be made as to the treatment to be employed to obtain the desired result.

Appendix 16. Literature review for Charles M. Russell National Wildlife Refuge, Montana, range survey and wildlife-livestock interrelationships.

Consideration of interrelationships between livestock and wildlife is the basis for making recommendations for the benefit of all wildlife species on CMR. Such interrelationships have been much discussed by wildlife managers. Whereas intensive livestock grazing may be detrimental to wild ungulates, prescribed grazing treatments have been found to benefit other wildlife species. Complete elimination of livestock grazing on the refuge would eliminate a management tool the manager has at his disposal.

Smith (1977) stated, "Livestock grazing is the single most important factor limiting wildlife production in the west. It has been and continues to be administered without adequate consideration for wildlife, especially on federally owned lands." Mackie (1978) reported that very few studies have been attempted in which more than a few of the possible effects and processes of competition and other grazing impacts have been considered. Most measure only short-term effects. More importantly, few studies have ever attempted to compare behavior and performance of wild ungulate populations between similar adjacent grazed and ungrazed ranges. Mackie (1978) stated that livestock grazing did not become established as an important factor until the mid-1880's, with the resulting disruption of habitat and interspecific relationships between grazing ungulates being of rather recent occurrence. Mayr (1963) observed that intense competition can occur when two species initially come into contact or where a radical change in the environment has upset a previous balance. Because of this rather recent introduction of domestic livestock onto western rangelands, changes have occurred in vegetative conditions and composition at an accelerated rate along with the adaptations by wildlife species to adjust to these rapidly changing conditions.

Direct negative impacts resulting from livestock grazing cited by Mackie (1978) include direct competition for food, cover, and space. Food requirements may be nearly identical, as between cattle and elk for most of the year, or may overlap for only short, often critical periods such as between cattle and deer during early spring growth of grasses and forbs. As grazing pressure increases, there is a greater tendency for diet overlap to occur. Trampling becomes important with heavier livestock use. Pearson (1975) reported that direct forage consumption accounted for only 36-47 percent of the total herbage removed or lost where cattle are grazed with trampling accounting for the remainder.

Season of use may affect livestock-wild ungulate interrelations according to Mackie (1978). Fall and spring range may be limited in extent; utilization by livestock of critical winter ranges after plant growth is completed may have an adverse impact. Alterations of cover by livestock may be a direct negative impact on wild ungulates when calving or fawning time occurs because of the tendency of these animals to have young in somewhat open, low shrub-grass cover types. Reductions or loss of cover could result in increased losses to predation or weather.

Appendix 16. (Cont'd.)

Feeding behavior of wild ungulates may be greatly influenced by presence and grazing of livestock. McMahan (1964) observed that white-tailed deer used significantly more browse and generally more grass and less forbs on season-long livestock grazed pastures as compared with an ungrazed area. Knowles (1976) found heavier use of forbs, especially yellow sweet clover, by mule deer in an ungrazed pasture compared to a livestock grazed pasture where deer utilized more browse. Buechner (1950) reported that pronghorn diets may be greatly altered on overgrazed cattle range, while overgrazed sheep range is unsuitable for pronghorn use. Distribution and movements of mule deer and elk in northcentral Montana may be influenced by occurrence of livestock on rangelands (Knowles 1975, 1976). Komberec (1976), McMahan (1966), Ellisor (1969), Firebaugh (1969), Dusek (1971), and Hood and Inglis (1974) suggested that livestock may interfere with deer use of all available habitats and may exclude deer use from some areas. Movements of elk from areas used by livestock have been reported by Jeffrey (1963), Dalke et al. (1965), Stevens (1966), Skovlin et al. (1968), Mackie (1970), Stark (1972), and Lonner (1975).

Mackie (1978) stated that indirect negative impacts by livestock on wildlife include gradual reductions in vigor of plants and quality of forage available, elimination or reduction in reproductive parts or vigor of plants such that future forage is diminished, elimination or reduction of important cover types and replacement by less favorable types, and alterations or reductions in the kinds, quality, or amounts of preferred plants through selective grazing. Where grazing is uniform or becomes so over large areas, vegetational diversity may be decreased.

Some individuals believe that livestock grazing is inherently or largely detrimental to wild ungulates as a result of these long term influences. Gallizioli (1977) considered overgrazing by livestock to be a major factor in destruction of deer and other wildlife habitat in the southwest. Severson and Bolt (1978) indicated that heavy livestock grazing on the northern Great Plains appears to have been a major factor in reduction of deciduous trees and shrubs along drainage ways. Such cover types may be critical to mule deer and other wildlife species of the area. Mackie (1978) indicated that diversity of cover types may be important, if not essential to mule deer. Irregular or spotty heavy grazing by livestock earlier may have contributed to this situation. More uniform distribution resulting from more intensive grazing systems or improved water distribution could result in less desirable conditions for deer.

The aspect of competition between wildlife and livestock was recognized by Smith and Julander (1953) as occurring in two forms - forage competition, which occurred if the supply of a forage species used in common was not adequate to meet both species' requirements within proper use limits for the species, and land use competition which may occur even with adequate forage but where lesser usage by one species would allow greater usage or numbers of the other species to occur. Mackie (1976) pointed out that it is quite difficult to effec-

Appendix 16. (Cont'd.)

tively evaluate range relationships, competition, and management needs of wild ungulates and other wildlife. He mentioned that he did not measure diet preferences but rather the response of deer and elk to livestock presence and grazing, noting that elk tended to avoid areas presently or previously grazed by cattle. He expressed interest in the potential of "social intolerance" as cited by Lonner (1975). Recent Missouri River breaks studies involving pastures where no livestock grazing occurred or on rested pastures in a rest-rotation system showed strong differences in wild ungulate distribution and use in relation to cattle distribution and use (Knowles 1975, Komberec 1976). Knowles (1975) observed that deer either moved or used all parts of their home range when cattle were turned into previously ungrazed pastures. Skovlin et al. (1968) reported that elk use was significantly less on range cohabitated with cattle than in areas where cattle use was restricted. Rates of elk use decreased as cattle stocking increased; however, moderate cattle stocking inhibited elk as much as heavy cattle stocking.

Skovlin et al. (1968) concluded that a light stocking rate promoted maximum sustained use of forage for livestock and wildlife. Where livestock production is the primary objective, moderate stocking would best fulfill the objective. Skovlin and Harris (1970) found that elk preferred season-long cattle ranges to deferred rotation ranges when cattle stocking was light. However, elk preferred heavily stocked rotation ranges to heavily stocked season-long ranges. Nelson and Burnell (1975) evaluated elk-cattle competition on pastures in a rotational grazing system and found that cattle and elk interacted significantly for both forage and space. Distribution patterns showed moderate overlap, and diets overlapped significantly. Social interaction between the two groups resulted in elk leaving the pasture to which cattle were moved, and elk were not observed to use the pasture used by cattle following cattle removal, except those areas within that pasture which were ungrazed by cattle.

Range improvements such as fencing and water developments often result in better range management as a result of improved distribution, more uniform utilization of forage, and less damage to soil and range resources. Mackie (1978) pointed out that while this may benefit the range resource, effects on wild ungulates may be detrimental. Fences can interfere with migrations and access to habitats for wild animals. Direct mortality may also occur as a result of crossing fences. Papez (1976) found that 13 percent of 144 mule deer mortalities to factors other than hunting, crippling, and winter kill were fence kills. As in the case of fencing, Mackie (1978) stated that in the development of water, "The expected effect may be the opposite by extending livestock use generally to previously little or only seasonally grazed areas and habitat types such that overlap or opportunities for overlap in use of resource are increased. This may be true on long continuously grazed ranges or on seasonally grazed ranges where stocking rates may be high." Additionally, uniform grazing patterns may result in the adverse effect of decreasing vegetation diversity of an area.

Appendix 16. (Cont'd.)

Effects of various grazing livestock systems upon wild ungulates has been discussed to some extent earlier in this section. Skovlin et al. (1968) observed deer and elk use on dual use livestock-big game ranges and single use big game-only ranges. Big game made the greatest use of range where cattle did not graze. Deer had a tendency to utilize the deferred rotation pastures more than the season-long pastures. No significant use difference was found between single and dual-use pastures for deer or for the three stocking levels on the dual-use pastures. Elk, however, utilized the game-only pastures at a significantly higher level than on dual-use pastures. As cattle stocking increased on the dual-use ranges, elk use decreased significantly, apparently because of greater abundance of ungrazed forage in the deferred units. Under light stocking, elk preferred season-long pastures, but under heavy stocking they preferred rotation pastures. As mentioned previously, light stocking was found to be the most desirable system.

Knowles (1975) found that in a rest-rotation grazing system in the Missouri Breaks, mule deer distribution and movements appeared to be affected by grazing treatments, and fawn production and survival may have been depressed in pastures receiving heavy grazing. Elk responded to the grazing by moving from grazed to ungrazed pastures without apparent effect. Heavy grazing use such as might be found on rest-rotation system grazed pastures leaves little residual vegetation and may increase the vulnerability of young animals to predation. Populations of microtine rodents may be reduced, forcing predators to seek alternate food sources, including wild ungulates.

Wittinger (1978) indicated that the dietary overlap between elk and deer was significant on rest-rotation pastures in Idaho. However, elk moved out of areas used by cattle, which lessened direct competition for forage but also limited the range area available to elk. No adverse effects on the elk population were noted during the study as a result of this situation.

Anderson and Scherzinger (1974) reported on a rest-rotation grazing system to improve winter elk forage in Oregon. Cattle were moved onto the range following range readiness and moved off the range at the midpoint of the growing season. The regrowth was then made available to wintering elk in the area. This system resulted in an increase in livestock forage because of improved range condition and an increase in elk use as a result of regrowth of high quality winter feed.

Mackie (1978) indicated that the often overlooked area of interspecific competition between wild ungulates may be intensified by livestock use. Elk tend to overlap both cattle and deer somewhat in terms of diet and distribution. Elk also tend to avoid cattle or areas grazed by cattle whenever possible. Areas not accessible to cattle are often highly important deer habitat areas. This tends to intensify competition between elk and deer. Changes in livestock practices may affect deer-elk relations in addition to deer-cattle and elk-cattle.

Beneficial impacts may result from dual use of rangeland by domestic livestock and wild ungulates. Use by livestock may result in

Appendix 16. (Cont'd.)

greater diversity in the habitat, thus indirectly benefitting certain wildlife species. Overgrazing of many intermountain ranges ultimately benefited deer populations by allowing browse species to invade lands formerly occupied by grasses. Mackie (1978) stated that while heavy or abusive grazing during one season may be destructive to wild ungulate habitat values, lighter grazing or grazing at another season may increase the availability of plants or have other beneficial habitat impacts. Mackie indicated that while a livestock grazing impact may benefit one species, it may detrimentally affect another. Longhurst et al. (1968, 1976) indicated that retrogressive succession from grasses and forbs to browse may have eliminated bighorn sheep while benefitting mule deer. Cosby (1978) reported that a planned livestock grazing system benefits both wildlife and the range in addition to providing livestock forage. Cosby recommended a rotation deferred grazing system to improve wildlife conditions. He mentioned a case of rotation by deer that coincides with livestock, where deer follow cattle to make use of succulent regrowth.

Anderson and Scherzinger (1974) indicated that elk habitat of the Bridge Creek Wildlife Management Area in Oregon was improved by implementation of a planned grazing program for livestock as well as improvement of range conditions. Elk made use of the regrowth on the management area following livestock removal. Cattle grazing was heavy enough to "top-off" grazed pastures, but light enough to leave an adequate volume of forage for elk in all pastures following livestock removal.

Mackie (1978) concluded one report with the observation that the probability of conflict between wild ungulates and livestock is high, and some negative impacts may be inescapable whenever livestock grazing occurs on range occupied by wild ungulates. He indicated that information is lacking with respect to impacts of grazing on wild ungulates. However, he cited numerous studies that have occurred in Montana and other western states which indicate that livestock grazing is detrimental to deer and elk. One study on nine state game ranges in Montana revealed that wintering elk numbers have increased an average of at least 100 percent following livestock removal.

Analysis of effects of livestock grazing upon ground nesting birds generally reveals that diversity of species and nesting densities are higher in undisturbed habitats than where grazing is allowed (Kirsch 1969). Quantity and quality of cover generally are adversely affected by grazing and trampling which affect density of nests and may affect nesting success because of predation on areas having reduced cover (Creston Valley Wildlife Management Authority 1974). Certain species such as the prairie horned lark, western meadowlark, and mountain plover benefit from moderate grazing intensities, however (Smith 1940, Karuziak et al. 1977).

Sisson (1976) indicated that sharp-tailed grouse in Nebraska preferred climax vegetation sites having relatively open canopy and sparse current growth with accumulation of plant litter. This probably

Appendix 16. (Cont'd.)

indicated avoidance of cool season grasses and forbs as well as a preference for residual cover of warm season grasses. Accumulation of litter on favored sites was attributed to very light or no livestock grazing. Christenson (1971) concluded that uniform stands of vegetation at least 12 inches high or patches of vegetation at least 14 inches high were necessary for nesting. He proposed that regulation of grazing to maintain uniform stands of vegetation at least 12 inches high might substantially increase grouse populations. Sisson's conclusions in his report were that grouse requirements differ from those considered desirable from a livestock production standpoint. Interspersion of cover and habitat diversity are generally reduced by high intensity grazing systems. Sisson stated that diversity of vegetation resulting from selective grazing (as opposed to planned, high intensity grazing systems) by livestock and wild herbivores would be expected to contribute to long term stability and productivity of the system. This concept should be carefully considered in evaluating impacts of this type system versus intensive grazing systems.

Effects of grazing upon small mammals may vary by species and grazing intensity. Flinders and Hansen (1975) reported that black-tailed jackrabbits were most abundant on light to moderately grazed ranges. Turner (1969) reported that pocket gopher activities appeared greater on ungrazed than grazed ranges. Cover is essential to sage vole survival, whether it be growing or litter. According to Maser (1972), cover provides some needed protection from predators for small mammals which are active during daylight. Deer mice, being nocturnal, are not so limited by cover limitations. Other small mammals such as prairie dogs appear to thrive in areas which have been abused in the past. Once the tall perennial grasses have been removed, prairie dogs are able to maintain a lowered state of plant productivity and site quality through colonial activities.

In summary, an examination of the available literature reveals only few situations in which livestock grazing benefits wildlife. Deer and small mammal populations have often responded dramatically to range overuse which replaces climax species with those more palatable or conducive to populations of the benefitting wildlife species. In certain situations, removal of old, cured vegetation will make plant regrowth more palatable to wildlife species. Removal of excess, old forage will also allow establishment of new individual plants, thus improving range and watershed conditions. A look at the wildlife species priority list under which proposed management priorities will be developed for CMR reveals that mule deer, sharp-tailed grouse, and elk will be the species having the greatest importance in terms of management impacts. All three species are affected to varying degrees by livestock grazing.

An analysis of the available literature concerning livestock-wildlife interrelationships results in the following conclusions:

1. Grazing by livestock has relatively few beneficial impacts upon wildlife.

Appendix 16. (Cont'd.)

2. Under light grazing intensities, livestock grazing is probably a "no-harm, no-good" situation in relation to most wildlife populations. Interspersion of habitat conditions which may result from light, selective livestock grazing may enhance certain wildlife species which require a vegetative mosaic for optimal habitat conditions.

3. Moderate and heavy livestock grazing intensities provide ever increasing detrimental effects upon most wildlife species. Certain species such as prairie dogs and mule deer may be positively affected by range overuse. Moderate livestock grazing rates would apply where wildlife values are not to be considered the major or dominant use.

4. Under light livestock grazing intensities, seasonal grazing appears to provide the best answer for CMR. Such a system should result in livestock activities being primarily confined to major coulee bottoms and ridgetops of gentle relief. Light stocking rates would help provide proper use of such areas; the majority of the refuge, which contains steeper topography, would be reserved for wildlife use.

5. Under moderate grazing intensities, implementation of an intensive grazing system such as rest-rotation would appear to offer the best solution for wildlife populations. A three or four pasture rest-rotation system would provide sanctuary for wildlife on the rested pastures when livestock are present on the pasture to be grazed. Such a system would require development of additional water facilities and more fencing, both of which may be detrimental to wildlife. Water development allows better distribution of cattle and allows them to penetrate sanctuaries formerly reserved for wildlife. Fencing impedes wildlife movements. If the decision is made to implement such a system, the "stocking rate is based on the forage that is produced on the portion of the range that is open for use each year" (Hormay 1970). Moderate grazing intensities should be applied where multiple use concepts are to be employed.

6. Livestock grazing should be regarded as a management tool to enhance wildlife populations. Flexibility should be an inherent part of the system; numbers should be modified in part by forage production during a given year. Introduction of heavier than normal livestock numbers temporarily into a pasture to remove rank vegetation could also be a management objective.

The feeling as to reasons why a wildlife refuge should contain domestic livestock is perhaps best summarized by Murie (1935): "I might mention that cattle here and there, if not so numerous that one is apprehensive about the range, also fit into the picture. There is something picturesque about the old time cattle ranch, although the outdoorsmen would not like to have that feature to pervade the entire field. Simplicity on a grand scale is the keynote of this whole outdoor picture."

Appendix 17. Methodology for estimating visitor use on the Charles M. Russell National Wildlife Refuge, Montana.

Although estimates of visitor use on the refuge have been made in the past, reliability of this information is tempered by a number of variables. The refuge is accessible by road, trail, horseback, foot, water, or other means at many locations. Only in a few areas is access controllable, such as at developed recreation areas. Thus, it is almost impossible to sample the many access routes and determine the amount of use the area receives. This is further complicated by the fact that three major highways cross the refuge: State Highways 24 and 117 on the east, and US Highway 191 on the west.

For purposes of this study, total visitation was estimated for dispersed recreation areas, developed recreation areas, and the Upper Missouri National Wild and Scenic River. Dispersed recreation areas constitute the bulk of undeveloped land and water surface on the refuge, as contrasted to developed recreation areas administered by COE and MDFW&P. The nationally designated wild and scenic river segment at the west end of the refuge is administered by BLM.

Dispersed area visitation

Dispersed areas were divided by the level of use they receive: high, medium, or low. These areas were determined by traffic count data, field observations, and professional judgment. Traffic count data were only available for a three-month period during the summer involving four traffic counters. Reductions were made in total counts to compensate for traffic not directly involved in recreation. Visitation for each type of area was calculated with these data, assuming that the amount of use they receive is in proportion to the volume of traffic on major highways crossing the refuge.

Participation rate factors derived from a preliminary survey of recreation use on the refuge (Fish and Wildlife Service 1978) were then applied to the estimate of visitors on dispersed use areas to obtain a measure of current visitation by activity (activity days). Based on survey data, activity days were converted to recreation days using a factor of 3.8, which represents the average number of activities in which an individual participates while visiting the refuge. Recreation days were then divided in half to obtain the number of visitor days, since a visitor day is half as long as a recreation day.

Since the year in which the previously referenced visitor survey was conducted was atypical due to bad weather, which restricted access by sportsmen, hunting and fishing use estimates were related to the Montana Statewide Comprehensive Outdoor Recreation Plan (Montana Department of Fish and Game 1978) for State Planning Regions 4, 6, and 7.

Developed area visitation

Since only partial information was available from COE on amount of visitation at developed recreation areas, it was necessary to estimate

Appendix 17. (Cont'd.)

use at these areas. In calculating this visitation, a distinction was made between nearby recreation areas and outlying recreation areas. The primary difference between these two types relates to proximity of the areas to local service establishments. Nearby areas are those located close to the town of Fort Peck, where there are a number of opportunities to obtain food, lodging, entertainment, and related services. In contrast, outlying areas are from 10-40 miles or more from the nearest service facilities.

Using traffic count data compiled by COE (R. King personal communication), the number of total counts recorded at nearby and outlying areas was determined. It was estimated that a visitor to nearby areas would make an average of six trips to and from local service facilities during his stay, while those who visit outlying areas would make a minimum of two trips during their stay.

Dividing traffic count data for nearby and outlying areas by the average number of trips made in and out by each vehicle provided an estimate of the number of vehicles at COE and State facilities. Multiplying the resulting figure times 2.68, which represents the average number of people/vehicle (Fish and Wildlife Service 1978), yielded an approximation of the number of visitors. As with dispersed areas, participation rate factors were applied to this visitation to obtain estimates of use by activity and then converted to visitor days.

Wild and Scenic River visitation

Based on BLM data (W. Cutler personal communication), it was assumed that about 30 percent of the floaters on the Upper Missouri National Wild and Scenic River traverse that portion of the river through the refuge during the primary use season. River use during the balance of the year is unknown but thought to be minor.

Projections of visitation

Due to growing scarcity and rising cost of fuel for transportation as well as numerous competing recreation resources available outside CMR, the impact of recreationists on the refuge in future years was assumed to be primarily dependent on local and regional changes in population. Thus, estimates of future use on the refuge under the Proposed Action alternative were based on anticipated population increases in the 150-mile area immediately surrounding the refuge (Appendix Table 17a.) Anticipated visitation under the other alternatives was based on variation in facilities and opportunities that would be provided by each. It was assumed that this use would be divided between dispersed areas, developed areas, and the wild river in about the same proportion as 1978.

Appendix Table 17a. Recreation visitation projections under each management alternative for the Charles M. Russell National Wildlife Refuge, Montana.

Activity	Present situation 1978	Annual visitor days (thousands)									
		No Action		Proposed Action		Intensive Wildlife Management		Multiple Use		No Grazing	
		1990	2005	1990	2005	1990	2005	1990	2005	1990	2005
Wildlife related											
Cultural studies	*	*	*	*	*	*	*	*	*	*	*
Environmental education	*	*	*	*	*	*	*	*	*	*	*
Viewing scenery and exhibits	104	105	107	105	107	105	106	107	110	105	107
Hunting											
Elk	4	4	4	4	5	4	5	4	4	4	5
White-tailed deer	*	*	*	*	*	*	*	*	*	*	*
Mule deer	5	5	5	6	7	7	8	5	5	6	7
Sharp-tailed grouse	1	1	1	1	1	2	2	1	1	2	2
Sage grouse	*	*	*	*	*	*	*	*	*	*	*
Pronghorns	1	1	1	1	1	1	1	1	1	1	1
Fishing											
Paddlefish	3	4	4	4	4	4	4	4	4	4	4
Lake fish	48	62	73	60	79	64	85	64	91	62	81
Nature observation	3	3	3	4	5	4	7	3	4	4	5
Wildlife photography	2	2	2	3	4	3	5	2	3	3	4
Backcountry travel-motor	1	1	1	2	3	1	2	2	3	2	3
Backcountry travel-nonmotor	*	*	*	1	1	1	2	1	1	1	1
Nonwildlife related											
Camping	32	33	35	33	34	30	25	33	35	33	34
Picnicking	77	78	80	78	79	75	68	78	81	78	79
Beach swimming	15	16	17	16	17	13	10	16	18	16	17
Powerboating	38	40	44	39	39	35	30	39	42	39	39
Nonpowerboating	6	21	28	21	28	23	30	25	30	21	28
Water skiing	11	11	12	11	11	9	6	12	13	11	11
Backpack/hike trails	*	*	*	1	2	1	3	1	3	1	2
Visit hist./arch. sites	1	1	1	1	2	1	2	1	2	1	2
Horseback riding	*	*	*	*	*	*	*	1	2	*	*
Other	2	2	2	2	2	2	2	2	3	2	2
Total	357	393	424	396	433	390	404	405	458	398	435

*Less than 1,000 visitor days.

VIII. GLOSSARY

VIII. GLOSSARY

ALLOTMENT. An area designated for use of a prescribed number and kind of livestock under a plan of management.

ANIMAL-UNIT MONTH (AUM). The amount of feed or forage required by an animal-unit for one month (approximately 1,000 pounds of air dry forage).

CARRYING CAPACITY. The maximum number of animals an area can support without inducing damage to vegetation or related resources. It may vary from year to year on the same area due to fluctuating forage production.

CLASS OF LIVESTOCK. Age, sex-group, or species of livestock.

COMMON ALLOTMENT. An allotment upon which several permittees graze livestock in common.

CONTINUOUS GRAZING. The grazing of a specific unit by livestock throughout the year or for that part of the year during which grazing is feasible. The term is not necessarily synonymous with yearlong grazing.

CROSS-FOSTERING. Putting eggs or young of one species of bird into the nest of a second species to be raised by the adopting parents.

DANCING GROUND. A traditional gathering site where the courtship ritual between male and female sharp-tailed grouse occurs. Nesting and rearing areas are almost always close by.

DIRECT ECONOMIC EFFECT. Income generated only by the economic sector (such as the livestock industry) to which a reference is made.

DISCOUNTED. Brought back to a present equivalent value, interest rate used was 7 1/8 percent.

DISPERSED RECREATION USE. Scattered recreation activity that occurs away from developed recreation areas.

DNC. Cover such as a mix of legumes and grasses used by waterfowl for nesting.

ECOTONE. A transition area of vegetation between two communities, having characteristics of both kinds of neighboring vegetation as well as characteristics of its own. Varies in width depending on site and climatic factors.

EDGE EFFECT. The influence of one adjoining plant community upon the margin of another affecting the composition and density of the population of plants and animals.

EMERGENT. Rooted vegetation which grows above the surface of the water.

ENDANGERED SPECIES. Any species which is in danger of extinction throughout all or a significant portion of its range.

FALL STAGING AREA. An area where a number of individual animals of a species temporarily congregate in late fall before snow, ice, and cold weather forces them to winter habitat. During mild winters, wildlife may stay in staging areas the entire season.

HEAVY GRAZING. More than 50 percent utilization of annual available forage.

HEDGED CONDITION. Shrubs which resemble trimmed hedges, usually because of browsing by herbivores.

INDIRECT ECONOMIC EFFECT. Income produced in one or more economic sectors (such as retail trade) by the receipt of income in another economic sector (such as the livestock industry).

LIGHT GRAZING. Between 0-35 percent utilization of annual available forage.

LITTORAL. Shore zone between high and low water marks characterized by vegetation development which is used for stabilization of the shoreline and spawning for various fish species.

MODERATE GRAZING. Between 35-50 percent utilization of annual available forage.

NATIONAL NATURAL LANDMARK. An area that possesses exceptional value or quality in illustrating or interpreting the national heritage of our nation.

NATIONAL REGISTER OF HISTORIC PLACES. The official list of the nation's cultural resources worthy of preservation.

NATURAL AREA. An area set aside indefinitely to preserve a representative unit of a major forest, grassland, or wetland type primarily for the purposes of science, research, or education.

PARENT MATERIAL. Unconsolidated mineral or organic matter from which soils are developed.

PRESENT VALUE. An amount of money which will become a given amount at a stated time in the future. For example, at 10 percent interest \$100 will grow to \$110 in one year; therefore, the present value of \$110 one year from now at 10 percent interest is \$100. If the end product is a series of payments, the present value is the amount that will result in the sums of that series.

RANGE IMPROVEMENT. 1) Any structure or excavation to facilitate management of range or livestock. 2) Any practice designed to improve range condition or facilitate more efficient utilization of the range. 3) An increase in the grazing capacity of range, i.e., improvement in range condition.

RANGE READINESS. The defined stage of plant growth at which grazing may begin under a specific management plan without permanent damage to vegetation or soil. Usually applied to seasonal range.

RANGE SITE. A distinctive kind of rangeland, which in the absence of abnormal disturbance and physical site deterioration, has the potential to support a native plant community typified by an association of species different from that of other sites. This differentiation is based upon significant differences in kind or proportion of species, or total productivity.

RESEARCH NATURAL AREA. An area on which natural features and processes are preserved with minimal human intervention for research and educational purposes. This designation differs from other classifications such as wilderness or refuge, in that the latter designations often have broader use-management objectives than the preservation/scientific applications of the research natural area.

RESIDUAL COVER. Vegetation, primarily grasses of sufficient height and density to hide birds from view at a level of three feet above the ground.

RIPPING (RANGE). The mechanical penetration and shearing of range soils to depths of 8 to 18 inches for the purpose of breaking hardpan layers to facilitate penetration of plant roots, water, organic matter, and nutrients. A range improvement practice used where native grasses of a rhizomatous nature can spread into the ripped soil.

ROTATION GRAZING. System of pasture utilization embracing short periods of grazing followed by periods of rest for herbage recovery during the same season. Variations of rotation grazing include deferred rotation and rest-rotation systems.

SECTION 7 CONSULTATION. Consultation with personnel of the U.S. Fish and Wildlife Service to determine environmental effects on species listed as endangered or threatened under Section 7 of the Endangered Species Act.

SELF-FURNISHED AUMs. Livestock AUMs which are derived from privately owned or state leased land within the CMR boundary. The number of AUMs authorized is generally reflected on the grazing permit, but no fee is assessed by FWS for grazing.

STRUTTING GROUND. A traditional gathering site where the courtship ritual between male and female sage grouse occurs. Nesting and rearing areas are almost always close by.

THREATENED SPECIES. Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

VISITOR CONTACT CENTER (VCC). A manned facility designed to provide general information.

VISITOR CONTACT STATION (VCS). An unmanned facility designed for dispersing information.

VISITOR DAY. Participation by an individual in one or more recreation activities during all or part of a 12-hour period.

VISITOR INTERPRETIVE CENTER (VIC). A structure designed for full-scale interpretation using exhibits, displays, and other media.

WILDERNESS. An area which has not been seriously altered by man set aside by legislative action to preserve a representative unit of a major forest, grassland, or other land classification type.

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IX. INDEX FOR TEXT

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X. PUBLIC COMMENTS AND FWS RESPONSES

**Advisory
Council On
Historic
Preservation**

1312 K Street, NW
Washington, DC 20005

Reply to:

Lake Plaza South, Suite 618
44 Union Boulevard
Lakewood, CO 80228

October 2, 1980

Mr. Erwin W. Steucke
Area Manager
Fish and Wildlife Service
Federal Building, Room 3085
Billings, Montana 59101

Dear Mr. Steucke:

Thank you for your request of August 1980 for comments on the draft environmental statement (DES) for Charles M. Russell National Wildlife Refuge in Montana. Pursuant to Section 102(2)(C) of the National Environmental Policy Act of 1969 and the Council's regulations, "Protection of Historic and Cultural Properties" (36 CFR Part 800), we have determined that your DES does not contain sufficient information concerning historic and cultural resources for review purposes. Please furnish the following data indicating compliance with Section 106 of the National Historic Preservation Act of 1966 (16 U.S.C. Sec. 470f, as amended, 90 Stat. 1320).

The environmental statement must demonstrate that either of the following conditions exists:

1. No properties included in, or that may be eligible for inclusion in, the National Register of Historic Places are located within the area of environmental impact, and the undertaking will not affect any such property. In making this determination, the Council requires:

--evidence that you have consulted the latest edition of the National Register (Federal Register, March 18, 1980, and its monthly supplements);

--evidence of an effort to ensure the identification of properties eligible for inclusion in the National Register, including evidence of contact with the State Historic Preservation Officer (SHPO), whose comments should be included in the final environmental statement. The SHPO for Montana is Dr. Robert Archibald.

2. Properties included in or that may be eligible for inclusion in the National Register are located within the area of environmental impact, and

Page 2
Mr. Erwin W. Steucke
Charles M. Russell National Wildlife Refuge
October 2, 1980

the undertaking will or will not affect any such property. In cases where there will be an effect, the FES should contain evidence of compliance with Section 106 of the National Historic Preservation Act through the Council's regulations. On page 20 it is stated: "Private cabins presently situated on CWR at the Pines, Fort Peck, Rock Creek State Park and Hell Creek State Park would be removed as the leases terminate. The areas would be rehabilitated into suitable wildlife habitat." Prior to the removal or destruction of these structures, the Fish and Wildlife Service should evaluate them for inclusion in the National Register. If they are found eligible then the Fish and Wildlife Service will be responsible for affording the Council an opportunity to comment on any undertaking it proposes that will affect them.

Should you have any questions, please call Ms. Betty J. Lefree at (303) 234-4946, an FTS number.

Sincerely,

Louis S. Wall
Chief, Western Division
of Project Review

Response to Advisory Council on Historic Preservation

1. Because of the sensitive nature of these resources and their vulnerability to unauthorized collecting activities on this million-acre area, detailed information was intentionally omitted from the environmental statement. However, we have coordinated closely with the Montana State Historical Society, and they have been advised of the historic and cultural resources that are known to exist on the Refuge.

It is stated that before any action is taken which may impact cultural resources, individual site surveys will be completed. In further compliance, the Fish and Wildlife Service will be glad to afford the Advisory Council on Historic Preservation an opportunity to comment on any proposed action affecting these resources. Thus, neither the Proposed Action nor any of the other alternatives described in the DEIS would adversely affect historic or cultural resources.

2. Should the alternative that is eventually selected for implementation involve the removal or destruction of any structures situated on the refuge, these structures will be evaluated by the Fish and Wildlife Service for their possible inclusion in the National Register.

2 October 1980

Mr. Erwin W. Steucke, Area Manager
U.S. Fish & Wildlife Service
Federal Building, Room 3035
316 North 26th Street
Billings, Montana 59101

Dear Mr. Steucke:

The C.M. Russell NWR Advisory Committee has briefly reviewed the draft EIS on management of the refuge. We generally support the content and intentions of Alternative B (Proposed Action), but wish to register the following proposed changes and comments.

Proposed Changes

- 1) Page 10, under Habitat Management, line 11; after "...agency's objectives" add "after consultation and agreement between the FWS, BLM, and concerned permittees."
- 2) Page 13, under Range Developments, paragraph 3, line 2; after "...for recreation programs..." change period to a comma and add "except that stock-watering facilities will be developed if boundary or other fencing leaves any grazing allotments on the Refuge or adjacent land without water."

Comments

- 1) Page 11, Paragraph 3; the committee was divided on if and how cooperative farming should be phased out. Each member will comment on this as an individual.
- 2) The committee agreed that phasing out cooperative farming on one hand to maintain "naturalness" and ripping 10,000 acres to improve wildlife habitat was inconsistent. Also, ripping should not occur on any sage grouse wintering sites.
- 3) One member pointed out mistakes in the numbers presented for presently-licensed AUM's. Individual permittees will point out mistakes, and every effort should be made to rectify these.

A draft of this letter was reviewed and approved by the committee.

Sincerely,

Bart W. O'Gara
Secretary

Responses to C.M. Russell NWR Advisory Committee

1. The EIS has been appropriately modified.
2. The EIS has been appropriately modified.
3. After reviewing public comment and reexamining pertinent research, the FWS has concluded that soil ripping is not a viable manipulative technique for habitat management on CMR. All references to ripping have been deleted from the proposed action.
4. Every effort has been made to eliminate errors.

UNITED STATES DEPARTMENT OF AGRICULTURE

SOIL CONSERVATION SERVICE P.O. Box 1078, Lewistown, Montana 59457

December 8, 1980

Erwin W. Steucke, Area Manager
Fish and Wildlife Service
Federal Building, Room 3085
316 North 26th Street
Billings, Montana 59101

Comment on draft environmental impact statement on Charles M. Russell National Wildlife Refuge.


The CMR EIS is approached as a refuge entity without sufficient consideration of the influences of the adjacent area. For instance several wildlife species habitat parameters include critical habitat outside the refuge boundaries.

With the long irregular narrow land pattern of the refuge plus the fact the land is split by the Fort Peck Reservoir, it would be difficult in managing for wildlife maximums without increasing wildlife pressures on the private sector.

There should be another alternative including intensive management of the livestock use as a tool in improving the overall range condition and especially on excellent condition range.

The EIS indicates that light stocking is significantly better than moderate stocking of livestock for wildlife. This will vary as to range condition which is not discussed sufficiently in the EIS.

There is an indication of conflicting effects to fencing. Why should cross fences if properly designed have detrimental effects on some wildlife, yet if the refuge boundary is fenced there would be no significant detrimental impacts to wildlife expected.


Sam L. Short
Area Range Conservationist



Response to the USDA Soil Conservation Service

1. The concept of ecosystems was recognized in the development of management plans, and adjacent landowners have been involved in the planning process.
2. The Proposed Action and Intensive Wildlife Management alternatives are in fact prescription grazing alternatives. Each allotment will be evaluated, and a grazing system will be developed based on an allotment's individual characteristics.
3. Based on current habitat (not range) conditions, light stocking is needed to promote increased shrub growth and other habitat qualities now lacking. Once these conditions are achieved, moderate stocking may be more desirable in some areas.
4. The FWS does not expect there will be significant differences in impacts between boundary fencing and cross fencing pastures.

DEPARTMENT OF THE AIR FORCE
AIR FORCE REGIONAL CIVIL ENGINEER CENTRAL REGION (AFESC)
1114 COMMERCE STREET
DALLAS, TEXAS 75242
28 November 1980



Mr. Erwin W. Steucke, Area Manager
Fish and Wildlife Service
Federal Building, Room 3085
316 North 26th Street
Billings, Montana 59101

Dear Mr. Steucke

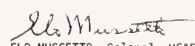
Thank you for the opportunity to review the draft environmental impact statement on management of the Charles M. Russell National Wildlife Refuge.

We fully support the establishment and management of wilderness areas; however, you should be cognizant of the fact that Air Force training requirements have the potential for creating disturbances to ground activities. The Air Force currently operates the Hays Military Operating Area (MOA) which is located primarily west of the reservoir; however, a portion of the MOA overlaps the reservoir proper at altitudes from 8,000 to 18,000 feet mean sea level. Although a floor of 8,000 feet does not impact animal and most bird habitation, this altitude does not permit realistic low altitude maneuvering. The Air Force is proposing to reduce the lower limit of this MOA to 3,000 feet above ground level (AGL). In addition, there is a request to extend a route from instrument route (IR) 404 to the Hays MOA to enable aircraft to enter the MOA from the east. IR 404 currently traverses the eastern edge of the management area as low as 400 feet AGL. Any route adjustment to accommodate this request will more than likely penetrate the reservoir area. These Air Force activities may have an impact on the proposal to reintroduce endangered or unique species into the management area. In selecting suitable reintroduction sites we ask that you recognize our need to conduct realistic training and make provisions accordingly.

While conflicts between Air Force flying areas/routes and the proposed management area are few, route and airspace requirements of the military are subject to change and do change frequently. Mission requirements, fuel costs, and environmental constraints all act on the decision to locate a military training activity. Because of general aviation and population pressures, the Air Force has relegated low altitude high speed flight to those areas least accessible and sparsely inhabited.

It is essential that management of the Charles M. Russell National Wildlife Refuge area be carried out so as to not restrict use of low altitude airspace by the Air Force.

Sincerely


ELO MUSSETTO, Colonel, USAF
Regional Civil Engineer

Cy to: SAC/OEV
TAC/OEV
AF/LEEV
AFESC/OEV
341 CSG/OEV
AFREP/FAA CR/GLR/RMR

Response to the Department of the Air Force

1. The FWS recognizes the potential for creating ground disturbance from overflights in the Hays Military Operating Area. Ongoing and future management actions will take these factors into consideration. Any future conflicts will be addressed by the FWS and Air Force towards reaching mutually satisfactory arrangements.



DEPARTMENT OF THE ARMY
OMAHA DISTRICT CORPS OF ENGINEERS
6014 U.S. POST OFFICE AND COURTHOUSE
OMAHA, NEBRASKA 68102

REPLY TO
ATTENTION OF

NR0PD-A

25 November 1980

Mr. Erwin W. Steucke
Area Manager
U.S. Fish and Wildlife Service
Room 3035, Federal Building
316 North 26th Avenue
Billings, MT 59101

Dear Mr. Steucke:

This office has reviewed the Draft Environmental Impact Statement (DEIS) on the management of the Charles M. Russell National Wildlife Refuge (CNR) in Montana. We are inclosing our comments for your consideration in development of the Final Environmental Impact Statement.

Thank you for giving us the opportunity to provide these comments, which we hope will be of assistance to you.

Sincerely,

1 Incl
As stated

for Richard D. Boston
ARVID L. THOMSEN
Acting Chief, Planning Division

General Comments:

We agree that Alternative B (Proposed Action) is the most desirable alternative and also acknowledge that there will be some social and economic obstacles to overcome in implementing this alternative. The other alternatives may not be implementable under existing Fish and Wildlife Service laws and policies.

We recognize that several constraints alter normal refuge management, however, we highly recommend the refuge be managed as a National Wildlife Refuge, to the greatest extent possible.

We recognize that good winter habitat is a critical element in the survival of wildlife in the Missouri River breaks country of eastern Montana and encourage you to consider a more extensive shrub and tree planting program than is recommended in Alternative B. We recommend plantings specifically in the valley draws, canyons and ponds which will support plant growth. Also, we recommend these areas be fenced to preclude damage by cattle. Our experience indicates that habitat damage by cattle is a far greater detriment to the naturalness of an area than is the fencing of critical habitat areas. This type of fencing insures the permanency of the habitat during winter and drought periods.

We also recommend that cooperative farming be implemented in areas where the visual naturalness is not interrupted. This will diversify the habitat, food source and therefore the wildlife.

The grazing of livestock should not be eliminated, but remain primarily as a habitat management tool.

Specific Comments:

Page 1, paragraph 2, Foreword. Further discussion in this paragraph may be warranted to clarify how Public Law 94-223 solved part of the management problem on CNR. The first sentence states that "...the conflicting legislation and mandates between the Corps of Engineers and the Fish and Wildlife Service remain." This wording should be deleted from the sentence since all jurisdictional questions between the two agencies have been resolved in a Memorandum of Agreement signed in July 1979. It is further recommended that this paragraph be rewritten as follows:

"Passage of Public Law 94-223 in 1976 has solved part of this management problem. Also, a Memorandum of Agreement was signed by the Corps of Engineers and the U.S. Fish and Wildlife Service in July 1979. The agreement was signed to insure that both agencies coordinate all future planning activities on the Charles M. Russell National Wildlife Refuge."

Page x, paragraph 1, No Action Alternative. The last sentence states that "Recreational developments would remain essentially unchanged." This statement may conflict with planned recreation concepts and developments presently under consideration in the Corps of Engineers Master Plan for the Fort Peck Lake Project. It is recommended that this sentence be rewritten as follows:

"Any changes in the status of recreational development would be accomplished in accordance with the Memorandum of Agreement of July 1979."

Page x, paragraph 5, Intensive Wildlife Management Alternative. The last sentence states that "...COE-FWS legislative conflicts would have to be resolved in favor of FWS." These conflicts have been resolved by the Memorandum of Agreement signed in July 1979 by the two agencies and thus the wording quoted above should be deleted from the sentence.

Page xi, paragraph 4, Intensive Wildlife Management Alternative. The second sentence states that "Private cabins would be eliminated and the areas returned to wildlife habitat." This statement is not consistent with the Memorandum of Agreement signed by the Corps and FWS in July 1979, nor is the statement consistent with past interagency discussions. It is recommended that this sentence be deleted from the paragraph.

Page 1, last sentence. The last sentence should be rewritten as follows:

"The COE held public meetings also at Glasgow, Lewistown, Glendive and Jordan in June 1979."

Pages 4, 5, and 6. We agree with the CNR goals, wildlife objectives and range objectives.

Page 5, Wildlife Objectives. On page x it states that the "...swift fox would be reintroduced as they become available." There is no mention of this species under wildlife objectives.

Page 9, paragraph 3, General. The first two sentences state that "Clarification of conflicting legislation and management responsibilities between COE and FWS would be sought. A cooperative effort with COE would be launched to determine ownership of all lands within the CNR boundary." These two sentences, along with the rest of the paragraph should be deleted since the above issues are presently being coordinated according to Memorandum of Agreement signed in July 1979.

Page 13, last paragraph. This paragraph states that "FWS would work with the COE in recommending operation of the Fort Peck Dam and Reservoir in a manner which would tend to limit water level fluctuations to enhance recreation and fisheries opportunities..." The Corps of Engineers acknowledges the importance of water level fluctuations in fisheries management and recreation. The Corps will work with the FWS and coordinate the missions of FLOOD CONTROL, NAVIGATION, IRRIGATION AND POWER GENERATION, with fisheries management and recreation when possible.

Page 15, Figure 1. The following recreation areas should be shown on the map: Reynolds Hill Road Recreation Area (future); the Pines Recreation Area; and the Flat Lake Recreation Area.

Page 16, Mitigating Measures. Suggest constraints be softened to allow for mitigating measures. These would include fencing, construction of stock ponds and other management facilities, etc. where the visual naturalness would not be impaired. This would retain a natural and/or rustic setting on the refuge.

Page 17, last sentence. This sentence states that "If recreation activities result in significant conflicts with wildlife, actions would be taken as necessary to solve the problem." This type of an issue will be dealt with under the terms of the Memorandum of Agreement signed by the two agencies in July 1979, thus the sentence is inappropriate in this document.

Page 18, paragraph 1. This paragraph contains two specific statements recommending the removal of private cabins. These statements are not consistent with the Memorandum of Agreement signed by the Corps and FWS in July 1979, nor are they consistent with past interagency discussions. It is recommended that these statements be deleted from the paragraph. The third sentence states that "The legislative conflicts between COE and FWS would have to be resolved...". This sentence implies that additional legislation would be proposed to clarify past jurisdictional issues. Since all jurisdictional issues have been resolved by the Corps of Engineers and the U.S. Fish and Wildlife Service in the Memorandum of Agreement signed in July 1979, it is recommended that the entire sentence be deleted from the paragraph.

Page 26, paragraph 3, last sentence. This sentence states that "Removal of private cabins would require that the FWS-COE legislative conflicts be resolved in favor of FWS." This sentence is not consistent with the Memorandum of Agreement signed by the Corps and FWS in July 1979, nor is the sentence consistent with past interagency discussions. It is recommended that this sentence be deleted from the paragraph.

Page 54, Figure 8. The following existing recreation areas should be shown on the map: The Pines Recreation Area and the Flat Lake Recreation Area.

Summary Comments:

Regardless of the management alternative finally selected for implementation on CHR, the Corps of Engineers will continue to coordinate with the FWS to insure that all Federal lands within the CHR boundary are managed in the public's best interest.

3

Response to the U.S. Army Corps of Engineers

1. The foreword has been rewritten.
2. FWS agrees; the text has been amended.
3. The text has been amended.
4. This action is not proposed but is an alternative. Management conflicts of this type would be cooperatively resolved within the terms of the Memorandum of Agreement between the Corps of Engineers and the FWS.
5. The text has been amended.
6. The text has been amended.
7. The text has been amended.
8. The text has been amended.
9. The map has been revised.
10. The decision to manage in a "generally natural setting" is in accordance with FWS legislative mandates and policies. In examination of NEP values compiled on allotments, it has been concluded that additional water development would be detrimental to most wildlife species by distributing livestock into areas now needed and used almost exclusively by wildlife. Situations will, however, be evaluated on a case-by-case basis.
11. The text has been amended.
12. The text has been amended.
13. The text has been amended.
14. The map has been revised.



UNITED STATES DEPARTMENT OF COMMERCE
The Assistant Secretary for Policy
Washington, D.C. 20230

NOV 17 1980

Mr. Erwin W. Steucke, Area Manager
Fish and Wildlife Service
U.S. Department of the Interior
Federal Building, Room 3035
316 North 26th Street
Billings, Montana 59101

Dear Mr. Steucke:

This is in reference to your draft environmental impact statement entitled, "Management of Charles M. Russell National Wildlife Refuge, Montana." The enclosed comment from the National Oceanic and Atmospheric Administration (NOAA) is forwarded for your consideration.

Thank you for giving us an opportunity to provide this comment, which we hope will be of assistance to you. We would appreciate receiving six copies of the final statement.

Sincerely,

Robert T. Miki
Deputy Assistant Secretary for
Regulatory Policy (Acting)

Enclosure Memo from Mr. Kenneth Hadeen
Environmental Data and
Information Service, NOAA



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
ENVIRONMENTAL DATA AND INFORMATION SERVICE
Washington, D.C. 20235

Center for Environmental Assessment Services

October 2, 1980

D242:NR

TO: FF/EC - Joyce Wood

FROM: OA/D2x1 Kenneth Hadeen *Enc. 2 to Mr. Steucke*

SUBJECT: DEIS 8009.20 - Management of Charles M. Russell National Wildlife
Refuge--Montana

General Comments: None.

Specific Comments (See page 33 under Climate Section)

The DEIS states that winters are bitterly cold (-34°F to -50°F) and summers are hot (100°F+). The DEIS would be more precise if it stated that winters are moderately cold (average January minimums are near 0°F). Occasionally, bitterly cold periods with temperatures of -20°F or lower are experienced, and the lowest on record is -58°F. Summers are what most people would consider pleasant, with low humidity and afternoon readings in the middle 80's and morning minimums in the middle 50's. Occasionally, periods of 100°F temperatures are experienced, with an extreme of 112°F being the highest on record.

(RF: D242, R. Leffler)



10TH ANNIVERSARY 1970-1980
National Oceanic and Atmospheric Administration
A young agency with a historic
tradition of service to the Nation

Response to National Oceanic and Atmospheric Administration

1. The text has been amended.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII
1860 LINCOLN STREET
DENVER, COLORADO 80295

DEC 9 1980

Ref: 8MD

Erwin W. Steucke, Area Manager
Fish and Wildlife Service
Federal Building, Room 3085
Billings, Montana 59101

Dear Mr. Steucke:

Thank you for the opportunity to review your agency's draft environmental impact statement (EIS) for Management of Charles M. Russell National Wildlife Refuge. We appreciate the complexity of the management problems facing you and support your efforts to improve the protection of the natural environment of this beautiful area.

EPA comments are as follows:

1. We support your proposed alternative because it best meets the objectives for which the Refuge was established. This alternative should also better protect the area's soils and related water quality values.
2. We would suggest that you examine the possibility for more gradual reductions in cattle use of the area than is proposed under the selected alternative. A gradual approach could lessen the economic impact on the ranchers involved.
3. Is there a possibility that improved range conditions and consequent better forage could offset, to some degree, a lesser number of AUM's as proposed under your preferred alternative?
4. Though it appears to be an improvement over the present situation we do not believe the multiple use alternative best meets the objectives of the Refuge. We would suggest that the multiple use alternative include an analysis of the impacts of a shoreline scenic drive and possible trail.

According to EPA's rating system for draft impact statements, this EIS is rated LO-1 (lack of objections - sufficient information). If you have any questions, please contact Mr. Gene Taylor in our Helena, Montana Office at (406) 449-5486.

Sincerely yours,

Robert L. Williams
Robert L. Williams
Regional Administrator

Response to Environmental Protection Agency

1. The FWS agrees, and this will be considered when planning implementation of the management plan.
2. If evaluation in the future shows that wildlife objectives can be met with more livestock AUMs than provided for in the Proposed Action, consideration will be given to increasing livestock AUMs.
3. The Multiple Use alternative will not achieve the wildlife goals and objectives. This alternative does include a shoreline scenic drive and cross-country trail along a portion of the CMR Refuge, the impacts of which have been addressed on page 94 of the FEIS.



DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, D.C. 20410

OFFICE OF THE ASSISTANT SECRETARY
FOR COMMUNITY PLANNING AND DEVELOPMENT

IN REPLY REFER TO:

Mr. Don W. Minnich
Regional Director
U.S. Department of the Interior
Fish and Wildlife Service
P. O. Box 25486
Denver Regional Center
Denver, Colorado 80225

Dear Mr. Minnich:

Subject: Draft Environmental Impact Statement
on the Management of the Charles M. Russell
National Wildlife Refuge in Montana

Thank you for providing us the opportunity to review the above draft Environmental Impact Statement (EIS). In accordance with 24 CFR Part 50 Protection and Enhancement of Environmental Quality, Department of Housing and Urban Development procedures, particularly Section 50.61 of our Regulations, we are forwarding the EIS to the responsible HUD Regional Environmental Officer. He will review and comment as appropriate, directly to you by your due date.

To assure prompt review of all non-HUD EIS's, you should send copies of all future EIS's as follows:

1. All EIS's on legislative proposals, regulations, or policy documents of national significance should be sent to Mr. Richard H. Broun, Director, Office of Environmental Quality, HUD, Washington, D. C. 20410; and
2. All other EIS's should be forwarded to the appropriate HUD Regional Office for comment. We have enclosed a list of our Regional Environmental Officers and their addresses.

If you have any questions in this regard, please feel free to contact me at (202) 755-6300.

Sincerely,

Richard H. Broun
for Richard H. Broun
Director
Office of Environmental Quality

Enclosure



DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
REGIONAL/AREA OFFICE
EXECUTIVE TOWER - 1405 CURTIS STREET
DENVER, COLORADO 80202

REGION VII

October 22, 1980

IN REPLY REFER TO:

850Q

Mr. Erwin W. Stencke, Area Manager
Fish and Wildlife Service
Federal Building, Room 3085
316 North 26th Street
Billings, Montana 59101

Dear Mr. Stencke:

Thank you for the opportunity to review and comment on the draft Environmental Impact Statement for Management of Charles M. Russell National Wildlife Refuge in Montana.

Your draft has been reviewed with specific consideration for the areas of responsibility assigned to the Department of Housing and Urban Development. The review considered the proposals' compatibility with local and regional comprehensive planning and impacts on urbanized areas. Within these parameters this document is adequate for our purposes.

If you have any questions regarding these comments, please contact Mr. Carroll F. Goodwin, Area Environmental Officer, at FTS 327-3102 in Denver, Colorado.

Sincerely,

Raymond D. McKinney
Raymond D. McKinney
Director
Program Planning and Evaluation

AREA OFFICE
Denver, Colorado



United States Department of the Interior
BUREAU OF LAND MANAGEMENT
222 North 32nd Street
P.O. Box 30157
Billings, Montana 59107

IN REPLY REFER TO:
1791 (931) (962)

DEC 5 1980

Memorandum

To: Regional Director, Fish and Wildlife Service, P.O. Box 25486,
Denver Federal Center, Denver, Colorado 80225

From: State Director

Subject: Comments on Proposed Management of CMR National Wildlife Refuge, Montana

We have reviewed the Draft EIS for Management of CMR National Wildlife Refuge and have the following observations.

We in the Bureau of Land Management (BLM) are keenly interested in the wildlife resources of the region surrounding the Wildlife Refuge. We recognize that most wildlife species are as dependent on adjoining habitat on BLM, state and private lands as they are on lands inside the Refuge boundary. Livestock grazing is also a critically important and historic use of the lands inside and adjacent to the Refuge.

Our basic recommendation to Fish and Wildlife Service will be to select a plan alternative that will provide for cooperative planning for multiple use resource management; a plan that provides the flexibility to work with all affected agencies and private landowners to meet the best multiple use combinations for the region. We believe that this would strengthen our respective wildlife habitat management programs and would help to maintain the historic and economic uses of all lands in the area as well.

We are aware that the primary role of Fish and Wildlife Service in managing the CMR is protection and enhancement of wildlife habitat and related resources. BLM is responsible for sound multiple use management of a variety of resources, not the least of which is wildlife habitat. Despite the fact that we have somewhat different management objectives, we believe that we must work together with mutually beneficial programs to meet our respective goals. Because of the intermingled land ownership pattern inside and outside the Refuge, it is also imperative that we closely coordinate our activities with the state and private landowners if we are to successfully implement these programs.

The livestock permittees on and near the CMR Refuge have, for the most part, contributed extensively to the success of current wildlife management programs in the area. While there are instances of overuse and abuse of the land, most operators have taken a real interest in the wildlife resources. Notable is the cooperation and assistance provided in introducing and establishing the elk and bighorn sheep populations in the 1950's and 1960's, and turkey feeding during the hard winter of 1968. Lands owned and controlled by the permittees also contribute significantly to habitat for a variety of the wildlife species using the refuge.

2

From an ecological and practical standpoint it is not feasible to separate the CMR Refuge from the rest of the region. Even if it were practical to fence the Refuge boundary to control livestock, there are too many overlapping uses requiring coordinated consideration and management. We are convinced that a multiple use and cooperative approach must be used to obtain the desired results of first rate wildlife habitat on the CMR Refuge and surrounding areas. We fully intend to work with your agency and other associated landowners and agencies toward that end.

cc:
Director (222)
DM, Lewistown
DM, Miles City

M. De F. Field



United States Department of the Interior

GEOLOGICAL SURVEY
RESTON, VA 22092

NOV 4 1980

Memorandum

To: Area Manager, Fish and Wildlife Service
Billings, Montana

Through: Assistant Secretary--Energy and Minerals *[Signature]* NOV 7 1980

From: Director, Geological Survey

Subject: Review of draft environmental statement for management of Charles M. Russell National Wildlife Refuge, Montana

We have reviewed the draft statement as requested in the Regional Director's letter of August, 1980.

Measures such as sediment traps and stream buffer strips should be considered for use in reducing sediment discharge to streams, especially from any currently disturbed land areas (p. 38).

[Signature]
H. William Menard



One Hundred Years of Earth Science in the Public Service

Response to U.S. Geological Survey

1. While sediment traps and stream buffer strips are methods of reducing sediment discharge, road modification to avoid areas of excessive erosion due to rutting is also a workable method. The FWS will evaluate each situation and utilize the best one for each area.



IN REPLY REFER TO:
1202-04

United States Department of the Interior
HERITAGE CONSERVATION AND RECREATION SERVICE
MID-CONTINENT REGION
POST OFFICE BOX 25387
DENVER FEDERAL CENTER
DENVER, COLORADO 80225

NOV 13 1980

MEMORANDUM

To: Area Manager, Fish and Wildlife Service, Billings, Montana

From: Assistant Regional Director, Land Use Coordination

Subject: Draft Environmental Statement for Management of Charles M. Russell National Wildlife Refuge, Montana (DES 80-55)

Inventory and protection of cultural resources is a direct responsibility of the federal agency administering land. Early survey and identification of the cultural resources in the wildlife refuge will allow cost-effective planning and management of the resources. Therefore, we encourage the completion of surveys as soon as possible.

Additionally, discussion of impacts to cultural resources in the wildlife refuge is generally not adequate. Actions such as grazing, burning and an increased number of visitors can adversely impact these resources. These impacts, along with measures designed to minimize harm to cultural resources should receive consideration in the final statement.

Robert J. Arkins
Robert J. Arkins

Response to Heritage Conservation and Recreation Service

1. The FWS will comply with all pertinent legislation concerning the identification and protection of cultural resources. No significant impacts on cultural resources are anticipated by the proposed action. Also, please refer to page 3, paragraph 2, and Recreation Objective number 1 on page 6 in the text. In addition, impacts to cultural resources are discussed throughout the text in the Consequences Section.



IN REPLY REFER TO:
L7619 MWR(PEQ)

United States Department of the Interior

NATIONAL PARK SERVICE
MIDWEST REGION
1709 JACKSON STREET
OMAHA, NEBRASKA 68102
NOV 12 1980

Memorandum

To: Regional Director, Fish and Wildlife Service, Denver

From: Regional Director, Midwest Region

Subject: Review of Draft Environmental Impact Statement on Management of Charles M. Russell National Wildlife Refuge, Montana (DES 80-55)

In response to your memorandum of September 5, subject as above, we have these observations.

The route of the 1804-06 Lewis and Clark Expedition was designated the Lewis and Clark National Historic Trail by P.L. 95-625, the Parks and Recreation Act of 1978.

Section 551 amended the National Trails System Act, P.L. 90-543 (October 2, 1968) and established the Trail initially on Federal lands crossed by the expedition route. All alternatives for management of the Charles M. Russell National Wildlife Refuge should consider land- and/or water-based trail development along the expedition route (or approximating the route), recreation facilities and access to facilitate trail use, and interpretive facilities related to the Lewis and Clark Expedition.

The National Park Service will be developing a Comprehensive Management Plan for the Lewis and Clark Trail in FY 1981. The purpose of the Plan will be to coordinate development of the Trail by Federal, State, local, and private interests. Any questions concerning the Trail and the Comprehensive Management Plan should be directed to Mr. Bill Farrand, Regional Coordinator for Rivers, Trails, and Water Resources, at FTS 864-3482.

Enclosed for your information is a copy of the National Trails System Act as amended through November 1978.

Regional Director
Regional Director

Enclosure

Response to National Park Service, Midwest Region

1. Recreation and interpretation related to cultural resources were evaluated for inclusion in various alternatives based on their compatibility with wildlife objectives. Many of the ones included in the alternatives relate to the Lewis and Clark Expedition.



United States Department of the Interior

NATIONAL PARK SERVICE
ROCKY MOUNTAIN REGIONAL OFFICE
655 Park Street
P.O. Box 25287
Denver, Colorado 80225

IN REPLY REFER TO:
L7619 (RMR)PC

OCT 3 1980

Memorandum

To: Area Manager, Charles M. Russell National Wildlife Refuge,
United States Fish and Wildlife Service, Billings, Montana

From: Associate Regional Director, Planning and Resource Preservation,
Rocky Mountain Region

Subject: Draft Environmental Impact Statement (DEIS), Management of
Charles M. Russell National Wildlife Refuge

We have reviewed the subject DEIS. No units of the National Park System will be directly affected by the proposed management program.

However, we believe the first paragraph under Recreation and Cultural Resources for Alternative D on page 22 is somewhat inaccurate. The amendment to the National Trails System Act by the National Park and Recreation Act of 1979 only identified and established a Lewis and Clark National Historic Trail. It did not specify a Lewis and Clark highway route per se, but rather leaves to a comprehensive plan to determine precisely where the trail route will go. We suggest the following be substituted to make the paragraph more accurate:

"All recreation proposals ... would be interpreted. The trail would be nominated as a component of the Lewis and Clark National Historic Trail upon completion of a comprehensive plan for the national historic trail by the National Park Service."

The Regional Director of the National Park Service Midwest Regional Office, 1709 Jackson Street, Omaha, Nebraska 68102 is responsible for preparing the above-mentioned comprehensive plan. We suggest you consult with that Regional Director as to how your proposed trail would fit in with the comprehensive plan.

Richard A. Strait



Response to National Park Service, Rocky Mountain Region

1. The text has been amended. The FWS will coordinate the Lewis and Clark National Historic Trail with all agencies involved.



DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

MAILING ADDRESS (8p1)
COMMANDER
THIRTEENTH COAST GUARD DISTRICT
215 SECOND AVE
SEATTLE 98101
PHONE 206-442-7523

16476
DPL80-913

Mr. Don W. Minnich
Regional Director
United States Department of the Interior
Fish and Wildlife Service
Post Office Box 25486
Denver Federal Center
Denver, CO 80225

Dear Mr. Minnich:

We have reviewed your draft Environmental Impact Statement for Management of the Charles M. Russell National Wildlife Refuge in Montana, dated August 1980. Our review and comments are in keeping with parts 1508.15, 1508.26 and 1503.2 of the Council on Environmental Quality Regulations for implementing the National Environmental Policy Act (40 CFR 1500-1508).

Pursuant to the Council on Environmental Quality Regulations we have no comment on your environmental statement. Thank you for providing us with the opportunity to review this document.

Sincerely,

Richard F. Malm
Captain, U.S. Coast Guard
Chief of Staff
13th Coast Guard District

Copy: Commandant (G-WS-1), U. S. Coast Guard





Cooperative Extension Service

MONTANA STATE UNIVERSITY, U.S. DEPARTMENT OF AGRICULTURE, AND MONTANA COUNTIES COOPERATING
MONTANA STATE UNIVERSITY
BOZEMAN, MONTANA 59717

November 28, 1980

Area Manager
U.S. Fish and Wildlife Service
Room 3035
Federal Building
316 North 26th Avenue
Billings, MT 59101

Dear Area Manager,

I have been reviewing the dEIS for management of the Charles M. Russell National Wildlife Refuge. In particular, I have been studying the socio-economic analysis. I am pleased to see that the analysis include total effects, regional effects, - in terms of both dollars and labor and distribution of impact among lessees. However, there are some specific questions that I believe should be reviewed before deriving the final EIS. Some of my questions are tentative because I find it very difficult to tell whether the economic analysis is complete. I am concerned that the very large investment and O&M cost of some of the alternatives be included. In particular, I cannot tell whether the cost of acquiring in-holdings, building and maintaining fences and other developments are included. I will mention this again.

Value of AUM's and Recreation: I fully appreciate the difficulty of estimating these values. It appears the analyst has been conservative on values of both AUM's and Recreation. This EIS should not bear the burden of trying to answer this knotty problem, but it is interesting to me to calculate that the difference between CMR and Market Lease Rates for the 60,108 AUM's on the CMR might itself amount to about \$400,000 per year. Is this all or in part a subsidy to present lessees? Likewise, the growth factors for recreational activities appear low compared to the data presented in Table 13 A, page 187.

In-Holdings: Is the reduced economic activity associated with acquiring in-holdings that are range headquarters included? They should be included in the cost and in the regional analysis.

Regional Effect: What regional multipliers were used for agriculture and recreation. Are they different? I would expect more regional leakage from recreation but that may not be the case.

Indirect Effects: In my view, indirect effects are those that extend beyond the project itself. On page 106, indirect effects are defined as effects removed from the project in time and geography. Were this true, we would have a hard time including direct effects, removed in time, in our present value estimates. In so far as I can tell, indirect effects are correctly handled and calculated, but incorrectly defined.

Appendix 11, last line: It appears the decimals should be commas (3.452 should

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Area Manager, Fish & Wildlife Service
page 2

be 3,452 etc.) Further, per-capita income should not be totaled across the counties but omitted or averaged to avoid distortion.

B-C analysis: The text (page 191) says costs are discounted to present value but the data in Table 13 C show equivalent costs for 1985 and 2000. This seems inconsistent. The net direct effects (bottom of Table 13 C) don't reveal much because costs are not included. Regardless of the disclaimer on page 191, I would like to see the present net value of the alternatives. For example, does O&M include maintenance of the 400 miles of fence? The last paragraph on page 191 suggests that the source is current costs for O&M obtained from the Refuge. Are these costs and are they used to calculate O&M for fence, etc.?

Present value: The explanation of present value on page 191 is hard to understand and I have not been able to reproduce the results. Even if they are correct, I would like to see the argument presented a different way, perhaps as streams of benefits arising from investment and O&M.

Grazing on the multiple use alternative: The summary indicates livestock would receive approximately one-half of the allocated forage but, on page 94, it is indicated that this alternative would result in a decrease of 8,012 AUM's from a base of 60,108. The summary appears inconsistent with page 94 and the corresponding Table in the appendixes.

I hope that my comments will be useful to you in reviewing the dEIS.

Sincerely yours,

Verne W. House

Verne W. House
Public Affairs Specialist

VH/jlh

Response to Montana Cooperative Extension Service

1. The entire economic evaluation has been redone and the narrative revised to better explain the situation. The costs acquiring in-holdings, buildings, maintaining fences, and other developments are not addressed in the EIS.
2. The AUM value to the rancher has been reestimated using the line programming approach, which takes into account the difference in grazing conditions and services provided. The new AUM value used is \$12.87. The entire economic evaluation, narrative, and related appendixes have been revised.
3. See response #1 above.
4. The agricultural gross output multiplier used in the revised economic evaluation is 2.67, and that for tourism, 1.77.
5. The action on page 206 has been revised. A better definition is found in the glossary on page 232.
6. Appendix 11 has been corrected.
7. Present values and calculations of items in discounted terms have been dropped. The dollars in the report are in current dollar terms. Since a benefit cost analysis is not being prepared, net present value in a part of the EIS is of little use. The entire economic situation has been reevaluated and revised in the text.
8. The text has been amended.



MONTANA HISTORICAL SOCIETY

226 NORTH ROBERTS STREET • (406) 444-4584 • HELENA, MONTANA 59601

September 24, 1980

Erwin W. Steucke, Area Manager
Fish and Wildlife Service
Federal Building Room 3085
316 North 26th St.
Billings, MT 59101

Re: Draft Environmental Impact Statement
Charles M. Russell National Wildlife
Refuge

Dear Mr. Steucke:

Thank you for the opportunity to comment on Draft Environmental Impact Statement identified above. In general, we do not find its consideration of cultural resources to be adequate in the context of the 1966 National Historic Preservation Act, E. O. 11593, or 36 CFR 800 or appropriate for the basic ground rules of cultural resource preservation. Our specific findings and concerns are outlined below:

- a) Given the strength and rationale of the mandates for Federal agency care of cultural resources as dictated by the laws and regulations cited above, we do not think it appropriate that recreation and cultural resource management be consistently treated as similar management concerns. Although the preservation of some historic resources can be happily coordinated with interpretive/recreational use, FWS and COE are responsible for cultural resource identification and protection regardless of recreational strategies chosen. Additionally, contrary to many perspectives, recreational use of historic resources does not necessarily lead to their preservation. Hence, in both proposing alternatives and evaluating them, we recommend separate discussions of cultural resources under separate headings.
- b) Second, the basic COE and FWS responsibilities for cultural resource identification and protection cannot vary from alternative to alternative. They exist regardless of other management strategies chosen. The priorities for systematic survey and nomination or the forms of protection chosen may vary and should be discussed within each alternative, but not the primary responsibility. The current draft implies that more actual compliance work such as survey will be accomplished only with the proposed action alternative.

page 2
Erwin W. Steucke

- c) The discussion of the affected environment contains no consideration of cultural resources--either historic or prehistoric. Commensurate with the descriptions provided for other resource categories in the refuge, this section should describe the kinds, numbers, and locations of cultural resources already known to exist in the area, the extent to which systematic inventories have been undertaken, and any summary statements that are professionally possible about anticipations for locating other cultural resources.

We are familiar with cultural resource work and commitments being made in the refuge. Hence, we would urge that that work and understanding of cultural resource legal requirements be incorporated into this document.

Sincerely,

Marcella Sherfy
Deputy SHPO

MS/det

Response to Montana Historical Society

1. The FWS is in agreement that use of historic resources does not necessarily lead to their preservation; there is no intent to imply otherwise. A single heading is used to reduce the complexity and increase the readability of the text.
2. It is indicated in the EIS that the action for cultural resources is similar for all alternatives. The FWS will comply with all pertinent legislation concerning cultural resources as funds and manpower become available. Any variations in degree between alternatives are reflected by these two considerations.
3. Because of the sensitive nature of these resources, their vulnerability to unauthorized collecting, and after coordination with your office, FWS intentionally omitted this detailed information from the EIS. The data are, however, available in our Lewistown refuge headquarters for examination by qualified individuals.

MONTANA PUBLIC LANDS COUNCIL

Old West Rangeland Monitoring Project
2819 2nd Avenue N - 306 Pratt Bldg
Billings, Montana 59101
(406) 248-3030

November 13, 1980

To: Erwin W. Steucke, Area Manager
Fish and Wildlife Service
Federal Building, Room 3085
316 North 26th St.
Billings, MT 59101

From: C. E. Hitch
Montana Public Lands Council
Room 306 Pratt Building
Billings, MT 59101

Re: Comment on Draft Environmental Impact Statement for the C. M. Russell National Wildlife Refuge

I find this EIS the most difficult to comment on since the writers of the document seem almost totally confused. This confusion starts with the first sentence in the Foreword. It states the area has "suffered from a lack of comprehensive planning and conflicting jurisdiction". The first time I saw the area was about when it was designated by Roosevelt. It was in very general use by many interests including many head of horses, cattle and sheep. Wildlife were not plentiful, and there was a lot of bare ground. Your survey shows it to be 85% to 90% in good and excellent range condition (Appendix 9). I doubt if anybody will do any better to stabilize the area in the next 45 years. How the area has suffered I do not see.

Paragraphs 3 and 5 of the Foreword cite the CMQ guideline. Since there have been several grazing reductions in the past two years "according to our plan" it is questioned if the guidelines are followed. There is reason to believe your action has already been chosen, and this entire document is a wasted paper exercise.

Any planning effort should have qualifiable and quantifiable goals. Your statement in the Foreword (paragraph 4) shows a curious lack of both. "High quality wildlife habitat" would lead one to believe such was in progress until it comes to mind high quality habitat to the prairie dog is poor range condition and bare ground. High quality habitat is old diseased trees to some woodpeckers and clinging grub eaters. Thus you have included extreme opposites in your goal, with everything in between, without any limits on either from time, quality or quantity.

A quick check of the CMR goals on page 4 does little to clarify. Four and five speak of "Restore and maintain habitat" and "manage migratory bird habitats" and all wildlife are again in a neat little package. They are not, as I illustrated in the above paragraph. Number 6 speaks of the "nationally significant Missouri River

Erwin W. Steucke
November 13, 1980
Page 2

breaks ecosystem. It is not one ecosystem as your own mission states on the same page. It is generally thought to be a complex of associated ecosystems.

Number 8 of your goals again resorts to more such language in "grazing compatible with wildlife and habitat goals." Since these seem to cover anything somebody wants at that time and place, is it any wonder livestock interests are a bit upset with the F & WS?

Number 11 is the same story all over again. You cannot define what you want and where you want it so, how can you "coordinate and integrate"? Even here you qualify with "where feasible" which long experience has taught means it won't be.

In your Purpose and Need For Action (page 1) you quote "a local sentiment for more grazing." I attended most of the local meetings you mentioned and know most of the livestock owners that run on the CMR. I heard none of this sentiment. I did hear a lot of need for more grazing facilities - some fence but mostly water to help distribution problem. I also heard many people stating problems of stability in their livestock operation when confronted with F & WS instant decision technique. The economics of livestock operation nowadays requires the operator and his banker to be able to look ahead several years. I hope the readout of your scoping was more accurate in other areas, but conversations with some recreation and hunting interests does not so indicate.

A major problem with this EIS concerns the enclosed state school and private lands. You admit (Page 1, 1st paragraph) that they complicate management. You list them under Affected Environment (Page 31). From there on you treat the whole thing as nothing. Under Consequences (Page 84, 3rd paragraph) you state "Grazing on State and private inholding would remain at present levels." That is utter nonsense. If they are used with the allotment there is no way you can change or modify grazing on the CMR and not impact the grazing of these areas. You apparently show these areas in the total acres (Appendix 9) but then proceed as though they didn't exist in Appendix 5 and 10 when listing impacted AFM's and the Operations impacts. They are written off with a "will have to be purchased" under the no grazing alternative as though it would create no problem. You speak of a "willing seller basis" and totally ignore that the F & WS Management has almost precluded their sale to anybody else.

Another major problem with the EIS concerns the boundary problems. It is written off so easily it is impossible to believe. Such statements as "Range improvements would be limited to 400 miles of boundary fence" (Page xi, 3rd paragraph) or "other portions of the boundary would be fence if problems arise" (Page 13, Range Development) or "A boundary fence would be constructed around the entire refuge" (Page 86, 2nd paragraph). These statements totally ignore the extreme difficulty and cost of fencing much of the unfenced boundary. You also ignore the very high maintenance cost of such fence. Elk, snow, moving earth, and storms make even a carefully located fence in this area a maintenance headache. Many of these boundary areas would be much more. Since they cut across the access routes for livestock and wildlife they would certainly create grazing problems both inside and outside the CMR. I find no recognition or analysis in your grazing EIS of this and the problems that are obvious to those who know the area.

Erwin W. Steucke
November 13, 1980
Page 3

Another major problem with the EIS concerns the very inconsistent analysis of wildlife and their impacts. It is illustrated with prairie dogs. On page 3 you state "a specific plan for prairie dogs will be prepared" yet two pages later (page 5, 8) you show plans for "between 5,000 and 20,000 acres" of dogtown - not very definite, true, but much more so than any other objective. You state (Page 7, Habitat Management) that "Prairie dog control would be considered where refuge lands adjoin other landowners." This statement totally ignores that considering the given shape of the refuge and the known habit of these animals to migrate and form new towns, you do not have any dogtowns that are out of impact range of other lands.

Another illustration of this type of analysis concerns elk. You state (page 44) "this population is at a level that can be tolerated" and (page 74) "Elk populations would not change" in the proposed actions, but you call for "Improved security cover" (page 5, 9). Why? You have one of the highest producing herds known; and you do not want them to increase, yet you call and plan for more protection. That is trying to go two ways at the same time and raises questions about your real intentions. You also call for lure cropping to try to decrease elk depredation (Page 11, 3rd paragraph) yet in the same paragraph you call for "cooperative farming will be phased out". You know and the operators know this cooperative farming has attracted elk. What do you want to do, push them out onto private land and create more conflict problems?

Another major problem of this EIS concerns the use of known and not known scientific data. It is illustrated in your many references to "ripping of dense clay and pan spot sites". Up to 38,000 acres are planned under the multi-use alternative (Page 89) but some is planned and mentioned under other alternatives. This surprised me as I know of no long-time benefits of ripping these sites. Finally, I found (Page 85) your authority. The two personal communications deny the conclusions. Ross Wight's work and results also deny such conclusions. You have confused spiking, which is used on club moss and gramma areas and usually a silty site to break a vegetative barrier and allow a vegetative change. Ross Wight did his work on dense clay and pan spot sites, but it was furrows that gave the benefit. Ripping, and you define it correctly in the glossary, had no lasting effect. Furrows with a certain capacity gave the results of about 24 times increase in production. The shape of the furrows was not important if they held the water. Another factor shown in Wight's work that you apparently didn't read concerned the dense clay site. The area in question produced so little to start with that the increase did not give a significant yield. In other words, it did not pay.

Another such use of scientific data came into your preparation shown in Appendix 15. Suitability of an area for range use has been debated for a long time. You cite on page 198 many of the variables and why it is not possible to book such a factor. Then you, who have been unable to define your own goals in any recognizable quantity, on the basis of some wildlife observation, develop a table to two decimal places that rules areas not suitable for cow use that cows have used for most of 100 years.

Erwin W. Steucke
November 13, 1980
Page 5

Page 41, 2nd paragraph; Flooding and ice jams were not originated with Fort Peck. Having seen large ice cakes in the town of Loma and a 12-14 inch tree chewed off at the mouth of Eagle Creek, I contend your entire Missouri River plan should recognize this fact of life.

Page 51, Table 7 - Your mileage figures looked a bit odd so I checked. A straight line from the corner (SW) to the named area shows Canyon Ferry, Freezeout, Holter, and Hauser all much closer to 150 than the figures given. Deedman Basin is 90, not 80. To use this mileage a helicopter would be required, and they are not in frequent RV use. Not only are the figures in error, but what are you trying to show? It has nothing to do with the way people travel and, even if they were accurate, they mean little to the people who use the area for recreation.

Page 55 2nd paragraph; This is just not a fact as there are two projects proposed in the Circle area on which there is a lot of information, and it could be used. Certainly it would contribute to recreation demand in the area. If they go in is questionable, but the proposals are well drawn out and discussed throughout the area; and their impact on the EIS area would be substantial.

Page 55 last line and 1st line on page 56; The injection of money by recreation visitors is subject to two questions. First, many such visitors bring a lot of the food and housing with them, so the impacts are definitely not local. Second, there has been a substantial change in the amount of these long-range visits since gas prices went up.

Page 64 2nd paragraph; Your comments on sagebrush are a soil-site difference. Big sagebrush prefers heavy soil areas. Silver sage prefers silty and overflow sites. This will not change.

Page 64 3rd paragraph; You again state the herd size would remain as is. It is one of the highest in the state for reproduction. It got there with the roads and "lack of security cover" and seems to thrive. What direction are you really trying to go?

Page 71 Wildlife Habitat - Range Resources; These prairie dogs have been expanding into adjacent areas for 20 years, but so far you have done nothing but question the "necessary control measures".

Page 170 Appendix 8 2nd paragraph; You went to considerable expense to hire four very qualified and experienced range men to run a site and condition survey. You show it in Appendix 9 but otherwise bypass and ignore it and their recommendations. Then here you question if they even knew what they were doing. Every one of these men has more time in range than the entire staff at Lewistown. This reflects rather heavily on the quality of crew that wrote this document. Cry babies they are, but qualified is questionable.

This comment could go on for a real long time as there are many items that should be questioned. I will not, however, and will summarize.

1. You were given an area by Congress for administration, but you spend much time crying because you didn't get the whole cake. The COE were there before you

Erwin W. Steucke
November 13, 1980
Page 4

It is also a ludicrous situation that you, who as an agency have stopped needed water development for a long period, should use that lack as a club to limit or rule out livestock grazing.

Another major problem of this EIS concerns the use of figures in your so-called socio-economic figures. I will leave it to experts to delve into it in depth, but it doesn't take an economist to suffer from shock at your treatment. You mention several times a grazing fee economic impact (page 1x, last paragraph). It does not take good judgement to know that the \$1.89/AMU grazing fee is a very small part of the economic impacts of grazing or not grazing. There are operators who are paying that much and more in taxes or interest alone. You also cite the income from the 800 acres farmed as less than \$10,000. That, gentlemen, is about \$12.50 per acre; and if the gross is not more than that, it would not be farmed. If it is supposed to be the net income, it does not mean much as it is recognized that agriculture is a low net operation for most; but the gross is very important. As a state we run on it.

Your comparison with the six county totals is probably all that was available, but it is not very indicative. These ranches who run on the CMR are not a large slice of those counties.

Appendix Table 13-C shows a real poor use of figures. If you can get a recreation benefit of \$271,600 from no action, you should not claim \$292,000 benefit for your proposed action. The actual benefit of your proposed action is only \$20,400 over doing nothing. By the same token the Intensive Management Alternative is a heavy loss over what you could get by doing nothing at all. I don't know how you arrived at those figures, but they surely don't track.

It is not possible to individually take up all of the items in question in this EIS. Some of these will be used to show my problem.

Page 8 Range Improvements; Your statement would lead the public to believe there has been some done in recent years. No operators can point to any.

Page 9 overview (4); This statement tied to your proposed action is an outright fraud. You have raised questions on every signed off grazing plan in which you are involved. Your mandate and goals go too many different directions at once to agree to any grazing plan.

Page 9 General; Ownership of land purchased by the COE is not in question in most of the courthouses of the counties. Only Big Brothers seems to have question of what was purchased.

Page 24 No Grazing-Habitat Management; A non-grazing treatment would present a real wildfire situation, which was not even mentioned. Having seen a couple fires in this area, any assumption of control is questionable. Given a dry spell and wind (not unusual in this area) and adding that type of fuel supply to this rough area, is a near invite for a disaster.

Erwin W. Steucke
November 13, 1980
Page 6

and have assigned responsibilities and action that if they conflict with yours should be recognized. There is no call for the tears you shed in this. The same can be said for the state school lands and the private lands. It also applies to State Park right-of-ways, road right-of-ways and cabin area right-of-ways.

2. Your goals are not measurable for comparison so needed in an EIS.

3. Your scoping of problems leaves much to be desired.

4. You did not recognize and analyze the grazing impacts of your proposed action on enclosed lands.

5. You did not recognize and analyze the grazing impacts of the boundary problems.

6. There are gross inconsistencies in your discussion of wildlife problems.

7. Your use of research and scientific data is poor.

8. Your use of socio-economic impacts is questionable.

With all this, I would question if this document should even be considered a grazing Environmental Impact Statement.

CEH:da

cc: Advisory Council
Senator Melcher
Senator Baucus
Representative Marlenaa

Response to Montana Public Lands Council

1. Inasmuch as CMR is a national wildlife refuge, the management priorities are for wildlife, and range condition cannot be equated with wildlife habitat.
2. Over the past two years, the FWS has taken the opportunity to place portions of livestock grazing in a non-use status in those areas affected by ranches that have sold. In all cases, the amount of grazing remaining active, and the amount placed in non-use were based upon professional opinion using the best site specific data available at that time. The Proposed Action will modify these interim decisions.
3. A goal is normally expressed as a broad, general statement is usually not quantifiable, and usually has no specific date by which it is to be completed. An objective is a clear and specific statement of planned results to be achieved within a stated time period.
4. One of the mitigating factors considered in the Proposed Action is the ability to lend a stability factor to the permittee operation utilizing AUMs on CMR.
5. Recognition of state and private inholdings was included throughout the planning process. Although changes will be made in livestock AUMs under several of the alternatives, no changes are planned by FWS for state and private inholdings.
6. As ranchers know, a fence is expensive to install and maintain, but is frequently necessary for proper land management. The FWS recognizes these facts also.
7. The FWS acknowledges that prairie dogs establish new towns through migration to suitable habitat each spring. The Animal Damage Control program of the FWS will assist the private landowner in control of unwanted dog towns on private land.
8. Elimination of the farming program along the Missouri River in Phillips and Fergus counties will increase the amount of habitat for native wildlife. Lure crop farming in Valley County would be an attempt to alleviate or minimize elk depredations on agricultural crops. Improved security cover will help to hold elk on the refuge.
9. After reviewing public comment and reexamining pertinent research, the FWS has concluded that soil ripping is not a viable manipulative technique for habitat management on CMR. All references to ripping have been deleted from the text for the Proposed Action.

10. The range suitability criteria developed by the FWS were derived from the most applicable information available. The FWS acknowledges that such criteria are necessarily broad, and within groups of animals (domestic livestock), there is individual behavior contrary to the norm.

11. Your concern over the \$1.89 on AUM is correct in that the \$1.89 fee does not reflect the value of the AUM to the ranch operation. This has been corrected by adopting a linear programming (LP) approach to estimating the financial impacts to the rancher. The LP analysis estimates the change in gross income associated with a change in CMR AUMs. The LP measures changes in rancher cash expenditures, labor inputs, returns to investment, and beef cow inventories. The analysis does this using an average ranch budget for ranches of different ranch sizes classes. These budgets take into account numerous factors including seasons of use and differences in dependencies. This approach tailors the analysis to the regions and ranches by reviewing the representative rancher panel for the EIS area. In this case, the value per AUM was \$12.87. This technique is being applied to analyze similar grazing actions for BLM. The National Cattlemen's Association and Public Lands Council support this approach assessment. See Appendix 10 for example inputs and outputs.

The entire economic evaluation has been revised as have Appendices 10 and 13.

12. A number of developments including stock pond renovation have been completed in recent years.

13. This statement has been clarified.

14. The FWS acknowledges that Alternative E (No Grazing) would increase the fuel load on a site specific basis. This would increase the occurrence of wildfire on the refuge.

15. The text has been amended.

16. The table shows that within a 150-mile radius of CMR, from which about 75 percent of the visitation to the refuge originates, there are a number of other recreation areas with comparable resource values that attract visitors away from the refuge.

17. The potential impacts of such projects on recreational use on the CMR has been recognized in the DEIS, but such impacts are not quantifiable; since these projects are in the proposal stage only, they are beyond the scope of document.

18. Both of these have been taken into consideration in the preparation of recreation estimates and economic impacts.

19. The FWS agrees that silver sagebrush and big sagebrush prefer different soil types.
20. Since CMR is a national wildlife refuge, one of its purposes is to provide high quality wildlife habitat.
21. The Animal Damage Control staff of the FWS provides control assistance to requests from private landowners.
22. A range site and condition survey is just that; it does not contain recommendations. Any recommendations are derived later based upon that survey and the purpose for which an area is to be used.



COLLEGE OF LETTERS & SCIENCE

DEPARTMENT OF BIOLOGY

MONTANA STATE UNIVERSITY BOZEMAN 59717

3 December 1980

Mr. Ervin W. Steucke, Area Manager
Fish and Wildlife Service
Federal Building, Room 3085
316 North 26th Street
Billings, MT 59101

Dear Mr. Steucke:

Several members of our wildlife staff have been involved in studies and management of wildlife on and in the vicinity of the Charles M. Russell National Wildlife Refuge. Thus, we have direct interest in future management programs for wildlife populations and habitats on that area. We have reviewed the draft management plan and environmental impact statement and offer the following comments.

1. In general, we found the plan difficult to evaluate in terms of potential impacts and/or benefits on wildlife populations and habitats. Aside from some specific changes in livestock grazing, the plan is extremely general. It does not clearly spell out what will be done where, what priorities are, or how proposed actions will be followed up.

2. Paragraph 5, under Purpose and Needs, is bewildering. Was not the purpose of studies leading up to this plan to evaluate the status of resources on the CMRWR? Is the present document not also a "master plan" or a summary of that plan? This discussion would place development or specific wildlife management programs somewhere in the future.

3. We have reservations about the extent to which the plan and EIS focuses on livestock grazing. Indeed, it appears that the document is primarily a livestock grazing-range management plan in which wildlife management problems and needs or objectives are secondary. We recognize that grazing problems exist and concur that some changes in livestock grazing policies and practices would benefit wildlife and may be necessary. However, such changes might be more appropriately based on specific wildlife needs and management objectives. Would it not have been more consistent with mission and goals of CMRWR to have developed this plan around those needs and objectives and fit livestock grazing into the plan, when and where it would enhance wildlife values or where no conflict is likely to occur? The present document suggests that the opposite will occur; i.e., under Alternative B, Proposed Action, a (wildlife) habitat management plan will be developed by 1985 for each grazing allotment.

TELEPHONE (406) 994-4548

4. Wildlife, range and recreation objectives listed in the plan include no supporting rationale. Thus, they must be accepted at face value and cannot be evaluated in terms of their relationship to specific problems and needs or opportunities and constraints that may exist generally or on specific portions of the area. Also, in some cases, objectives appear to be inconsistent with one another, with existing knowledge, or with statements made elsewhere in the plan.

5. Wildlife management, especially habitat management, objectives take the view that, in some general manner (not indicated), habitat can or will be improved everywhere for everything, including several species of extremely diverse and conflicting habitat/environmental requirements. Without more specific details as to what will be done where, such objectives lack credibility. Some are inconsistent with present conditions or with potential of the area as a whole. For example, Objective 7, listing a goal of 10 mule deer/mi² has now been exceeded on some parts of the area. It is unlikely that some other portions will ever attain such density.

6. Wildlife objectives to not include continued assessment of resource characteristics and trends. Such assessment would seem essential for on-going evaluation of management needs and opportunities in a changing environment. Clearly, the intent of the plan is "to change wildlife environments through alteration of grazing and habitat improvements."

7. Apparently, livestock management under proposed action will be based on forage allocation determined by livestock distribution and behavior in relation to distance from water and slope. These criteria will be applied "across the board." Such an approach does not address specific needs or habitat requirements of all wildlife species on the area, nor does it recognize that both these needs and the potential for future livestock grazing may vary greatly from place to place and from time to time across the area. A variety of grazing prescriptions involving different stocking levels, different times or seasons of grazing, different grazing systems, and different breeds or classes of livestock may be necessary to meet specific wildlife and other management needs and objectives.

8. Alternatives A, D, and E would require major changes in the status of CMR or policies governing the National Wildlife Refuge System. At present they would have to be considered illegal. Yet, much discussion is directed to these alternatives that divert attention from Alternatives B and C that relate more closely to the mission and goals of CMRNRW. They may also foster additional confusion and misunderstanding of mission and goals. On the other hand, Alternatives B and C, the Proposed Action and Intensive Wildlife Management plans, probably represent only a part of a broad spectrum of potential wildlife management alternatives that might be employed or pursued within the CMR mission and goals statements.

9. Numerous questions can be raised concerning specific management prescriptions under the various alternatives. At least some seem to reflect general "pie-in-the sky" planning and not reflect careful assessment of

management needs or opportunities and constraints. Under proposed range developments, new fences, water developments and soil ripping are indicated. No specific details are given, nor is there any indication of how these actions would enhance watershed, wildlife or recreational values and programs.

10. The assessment of wildlife habitat-range resources seems to have been undertaken without consideration of how those resources are used and meet specific needs of individual wildlife species. We consider such assessment minimal and possibly meaningless. It does not provide basis for development of sound, effective management actions. Rather, assessment of grazing-habitat management problems and needs should address the requirements of individual species and how each is distributed on and uses the area, seasonally or yearlong. It is to state that a particular range-habitat resource is lacking or limiting in a certain area. Yet, it is an entirely different matter to determine whether anything could be done about it in view of environmental constraints. Presumptions of need and/or benefit based on general assessments may not be valid.

We fully support your effort to develop sound, aggressive management of wildlife populations and habitats and other resources on the CMRNRW. However, we question whether the present proposals fully address basic problems and needs or all possible management alternatives. If the present draft plan and EIS is revised, we hope that it would include more of the "master plan" for management. Wildlife management and other resource goals and objectives should be carefully evaluated and set forth more completely and prominently. Priorities should also be established. Alternatives should address both basic goals and objectives and priorities.

If necessary we would be happy to provide further explanation of our views and comments.

Sincerely yours,
Richard J. Mackie
Richard J. Mackie
Professor of Wildlife Management
Robert L. Eng
Robert L. Eng
Professor of Wildlife Management
Harold D. Picton
Harold D. Picton
Professor of Wildlife Management
Lynne R. Irby
Lynne R. Irby
Assistant Professor of Wildlife Management

Response to Montana State University

1. The level of detail requested here is more appropriate to a master plan and is available for review at the refuge office in Lewistown.

2. The planning process is summarized in Appendix 1b. The EIS is an assessment of the impacts resulting from the Proposed Action and other alternatives on specific environmental parameters. Development, specific management, and implementation will be initiated upon finalization of the EIS and fine tuning of the master plan.

3. Please see Appendix 1b which summarized the planning process and rationale.

4. The objectives are derived from the mission statement, goals, and purposes for CMR, the national wildlife refuge system, and the FWS.

5. Vegetational types and landforms are inherently diverse on CMR, and the maintenance of these communities will provide wildlife habitat for wildlife species with diverse habitat requirements.

Specific applications to meet specific wildlife needs on specific areas will be addressed in detailed habitat management plans after the final EIS is approved. The EIS generalizes the wildlife management plan for the refuge as a whole under each alternative.

6. It is correct that the intent is to improve wildlife habitat. All alternatives do include plans for a continued evaluation of plan success.

7. Forage allocation will be based on prescription treatment by allotment relative to wildlife habitat needs.

8. Regulations require the examination of alternatives "not within the jurisdiction of the lead agency."

9. The level of detail of the EIS is not appropriate for the discussion of specific management prescriptions (i.e. each new fence, each range development, etc.). This information is more suited to the master plan which will be finalized after a decision is made on the EIS alternatives.

10. The Habitat Evaluation Procedures used by FWS evaluate habitat components in relation to individual species. From this evaluation, habitat components that are lacking can be specifically addressed in management actions, dependent upon the capability of sites to correct habitat deficiencies.



State of Montana
Office of the Governor
Helena 59601

THOMAS L. JUDGE
GOVERNOR

December 8, 1980

Erwin W. Steucke, Area Manager
Fish and Wildlife Service
Federal Building, Room 3085
Billings, Montana 59101

Dear Mr. Steucke:

I am pleased to provide you with comments on the Charles M. Russell National Wildlife Refuge Management Plan Draft Environmental Impact Statement.

There are three observations that consistently surface upon reviewing the draft EIS and your proposed alternative:

1. The proposal to increase wildlife population to some stated level seems unrealistic; and the EIS contains no proposed plan of action on how this may even be accomplished.
2. The recommendation to reduce livestock grazing by one-third appears highly questionable since nearly all of the grazing allotments are in good to excellent condition. Reducing livestock grazing will not necessarily enhance a different vegetative species for other wildlife species.
3. The C. M. Russell Wildlife range is situated within a mixture of land ownership including state and private. Wildlife populations benefit from off-refuge use as well as on. The C.M. Russell refuge is not an island! Decisions on the refuge impact the entire ecosystem in the area. It is imperative that a management plan be developed cooperatively with state and private users.

Given the absence of any information on how various objectives, goals, and populations are going to be carried out, I am recommending that the EIS be redrafted to reflect the aforementioned points as well as those issues raised by the various agencies.

I have enclosed comments from four state agencies for your information. I trust that you will give them serious consideration and incorporate them in your final analysis.

Sincerely,
Thomas L. Judge
THOMAS L. JUDGE
Governor

Encl.

STATE OF MONTANA



DEPARTMENT OF

FISH AND GAME

Helena, Montana 59620
December 3, 1980

Lt. Governor Ted Schwinden
Room 207
Capitol Building
Helena, Montana 59620

Dear Lt. Governor Schwinden:

We have reviewed the Draft Environmental Impact Statement - Management of Charles M. Russell National Wildlife Refuge.

There is no supporting rationale for the goals, wildlife objectives, range objectives, recreation objectives and management alternatives presented in the Draft Environmental Impact Statement.

Thus, they must be accepted at face value and cannot be evaluated in terms of problems, needs, opportunities and environmental constraints. Also, no priorities are considered. In some cases, objectives may be or seem inconsistent with what is now known. For example, population goals for deer, sharp-tail, and elk are general extensions of data for local areas and cannot be applied throughout the refuge. The failure of past efforts to introduce bighorns should cast some doubt on that objective. Some objectives seem inconsistent with earlier statements (e.g., the objective to improve climax range condition (p.5), contradicts an earlier statement (p.ix), that climax vegetation is indicated to be predominantly in good condition).

There is a lack of information and/or detail to explain or illustrate how the various objectives, goals and accomplishments are actually going to be carried out.

Wildlife management objectives, and especially those dealing with wildlife habitat management, take the view apparently that, in some general manner (not indicated) habitat can be improved for everything including several species of extremely diverse and conflicting habitat/environmental requirements. Without more specific details of what will be done where, such objectives are meaningless and without credibility. Some are inconsistent with present conditions; (e.g., objective 7, listing a goal of 10 mule deer/mi². Present population on some of the area now exceed that; some other areas will never attain it).

The alternative action/management plans are all very general and lack specific details as to precisely what each would mean in terms of meeting the mission and goals of CMR and Wildlife, range and recreational objectives; how and where improvements or management actions would be carried

Lt. Governor Ted Schwinden
Page 2
December 3, 1980

out; and how these improvements or actions would be evaluated. All begin with and focus heavily on livestock-range management rather than meeting specific wildlife/wildlife habitat management needs and objectives. Three of the five alternatives call for reduction or elimination of livestock grazing as a first step and/or a major part of future management. While we have no quarrel with such reductions, per se, the approach may be and probably should be widely questioned.

To imply that any AUM taken away from livestock will automatically be used as food by "wildlife" would be difficult if not impossible to demonstrate. Most of the AUM calculations and estimates are based on grass and grass-like plants, not the total quantity of vegetation (forbs, brush, etc.). How much value is 15,000 AUM's of grass vegetation as food (p. 19) for antelope and deer? This point is not addressed in the EIS.

Under Alternative 8, the proposed action, a habitat management plan is to be developed by 1985 for each grazing allotment. Again, this seems to put livestock before wildlife. It would seem more correct or logical in view of the mission and goals of CMR to put the needs of wildlife and their habitats first. Such an approach would entail assessing population and habitat management needs and opportunities or constraints, and then developing a management plan for each that could include a livestock grazing allotment or plan! Lacking this basic assessment of wildlife population/habitat units and/or precise information on how various habitat/environmental attributes meet the seasonal or yearlong requirements of various individual species, the general guidelines presented for habitat management probably are invalid.

The proposed burning, planting, soil ripping, and plowing (farming) projects are not compatible with maintenance of wildlife habitat and the naturalness of the area that the U.S. Fish and Wildlife Service wishes to promote. Virtually nowhere in the literature is the planting of browse or brush cover deemed very successful for the improvement of wildlife habitat.

The repeated reference to introducing more bighorn sheep, plus bison, fox, ferrets, falcons, and the reference to additional goose pens and wildlife pastures is contrary to the statement in the Forward which says "Because habitat...is the key to wildlife abundance, this document emphasizes habitat...rather than...populations or densities." The concept of introducing wildlife onto the refuge and the wildlife pen/pasture program gives the entire Charles M. Russell National Wildlife Refuge a "zoo-like" air rather than a "natural-like" setting.

There are some rather vague references as to exactly what the status and future of hunting is or is going to be. Will there have to be some predetermined level or density of certain wildlife (sharp-tail, deer, elk, etc.) before hunting is allowed? The wildlife objectives are about as "heavy" toward densities as it is to habitat---again a direct contradiction of lines 14, 15 & 16 in the Forward!

Lt. Governor Ted Schwinden
Page 3
December 3, 1980

The entire EIS implies that CMR-NWR is somewhat of an "ecological island" and that accomplishments in any of the alternatives can be carried out or attained without sufficient regard to extensions of ecosystems outside the CMR-NWR!

The Montana Department of Fish, Wildlife, and Parks cannot support, as presented, any one of the alternatives or even the CMR goals, wildlife objectives, range objectives and recreation objectives without some explanation and detail as to exactly how they are to be attained.

We suggest the EIS be revised and reissued along with the plan to provide the necessary rationale for the EIS.

Sincerely,

Orville W. Lewis
Orville W. Lewis
Acting Director

JLE:mk

DEPARTMENT OF STATE LANDS



THOMAS L. JUDGE, GOVERNOR

CAPITOL STATION

STATE OF MONTANA

14061449 2074
14061449 4550 RECLAMATION DIVISION

1625 ELEVENTH AVENUE
HELENA, MONTANA 59601

LEO BERRY, COMMISSIONER

December 1, 1980

MEMORANDUM

TO: Governor Elect Schwinden

FROM: Leo Berry, Jr., Commissioner

RE: DSL Comments to Charles M. Russell Natural Wildlife Range Draft EIS

The following comments are offered by the Department to be incorporated into state's comments. The present CMRNR AUM allocation for livestock is not excessive.

Stock distribution is a problem which could be alleviated by water developments where compatible with wildlife habitat. The range is currently in good to excellent condition and proper distribution can increase forage capacity as well as wildlife habitat.

It is in the best interest of the school trust, at this time, to continue the policy of prairie dog control by lessees. The DSL will not allow uncontrolled expansion of prairie dog towns on state lands. The EIS is unclear on the extent of the proposed prairie dog habitat and the time of introduction of the blackfooted ferret.

Fencing is an issue that must be studied closely. We are fully aware that fencing is a hindrance to wildlife, especially to migratory ungulates. However, well planned fences can be used as an excellent management tool. We are strongly opposed to fencing of the refuge boundary, but where fencing can enhance management and bring about rapid upward trends in range condition in specified areas, it should be given utmost consideration.

Domestic livestock grazing has been a part of the Missouri River Breaks natural ecosystem for over 100 years. The benefits of well managed grazing practices are numerous to an ecosystem and are evident on the CMR. The Fish and Wildlife Service has accepted the DSL 1979 range survey and the resulting stocking rate for each tract of state land on the refuge. We have no particular problem with coordinating the season of use in individual grazing management plans where DSL, private operators and the Fish and Wildlife Service can agree.

We feel it would be in the best interest of both DSL and CMRNR if a Memorandum of Understanding was developed and signed by both agencies which would outline and delineate livestock grazing policies for those trust lands within the refuge boundary.

Memo to Governor Elect Schwinden
Page 2
December 1, 1980

The CMR EIS is vague on the proposal to dramatically increase the deer and elk populations. We are aware of the problems and the concern of private operators who border the refuge. We will but mention this concern as it is apparent that the Department of Fish, Wildlife & Parks will address this issue.

The Department favors the continuation of properly managed agricultural practices on the CMR. The desire to return the range to a natural setting does not outweigh the benefits to wildlife provided by these areas.

None of the suggested alternatives are acceptable to the Department. It is difficult to make specific comments on the EIS because no specific proposals are made. Because many of the state's concerns will focus on the habitat management plans yet to be formulated, it is imperative that the state and local ranchers be actively involved in the development of such plans. At that time the state's positions on water developments, prairie dog towns, management fencing, etc., can be more clearly defined.

CW

MONTANA DEPARTMENT OF LIVESTOCK



THOMAS L. JUOGE GOVERNOR

CAPITOL STATION

STATE OF MONTANA

14081449-2043

HELENA, MONTANA 59601

December 1, 1980

Ted Schwinden, Lt. Governor
Room 207, State Capitol
Helena, Montana 59601

SUBJ: C. M. Russell National Wildlife Refuge--Draft EIS

Dear Ted:

We have reviewed the draft environmental impact statement concerning the Charles M. Russell National Wildlife Refuge. Of the approximate 856,000 land acres, 90% is under livestock grazing. There are 60,108 AUMs allotted on the CMR. Formal range surveys conducted under private contract and by range scientists of the U.S. Fish & Wildlife Service have concluded that 92% of the range within the grazing allotments are in excellent to good condition. Only 1% of the range for livestock grazing is in poor condition and the USFWS has recognized in the EIS that this condition was caused by prairie dogs.

Eighty-seven ranchers run livestock in these allotments. No mention is made of the remaining 10% of land acres not grazed by livestock except that they are generally in excellent condition. No formal range surveys for these areas are reported. Under the draft EIS, a 1/3 cut in AUMs is recommended for providing additional nesting and hiding cover for upland game birds and additional forage for wildlife (primarily deer and elk).

The results of the 1/3 cut in AUMs, as expressed in the EIS, would have high adverse impacts on six livestock operators and may result in forcing these ranchers out of business. Other factors such as permittee indebtedness, other agricultural holdings, and nonfarm incomes are also mentioned. Taking these factors into consideration, an even greater number of operators could suffer high adverse impacts and be forced out of the livestock business than anticipated in the EIS. The economic analysis does not take into account the revenue derived by livestock earnings from the CMR, and more importantly, the money spent by livestock producers in the local communities.

One need read no further than the Forward in the EIS to recognize the entire document is based upon the emphasis of habitat quantity and quality for wildlife rather than animal populations or densities. Establishment of high quality wildlife habitat to provide adequate populations of wildlife species within constraints imposed by droughts, severe weather, disease, and other variables which are largely uncontrollable is emphasized.

AN EQUAL OPPORTUNITY EMPLOYER

Since an objective for CMR will be to provide 10 deer per square mile and 2.5 elk per square mile by restricting 1/3 of the AUMs for livestock, how does the CMR propose to control these large populations of deer and elk from depredating upon private land holdings, both within the refuge and those on its exterior? Attempting to accomplish this objective will have a negative impact on CMR's neighbors.

The primary emphasis of the EIS seems to be plant management for developing habitat quality. The whole aspect of wildlife management dealing with field rodent and predator damage control is not addressed. Acknowledgment of range improvement by livestock producers for the benefit of wildlife on the CMR has neither been recognized nor given attention in this draft EIS.

The EIS is very general in nature, very philosophical, and idealistic concerning wildlife management with complete disregard for neighbors. The realistic approach of recognizing that 92% of the grazing land in livestock allotments is already in excellent to good condition is a "feather in the hat" for livestock producers who have historically worked to improve the CMR. It is our recommendation the CMR National Wildlife Refuge should continue to be managed under the multiple use concept. Farmers and ranchers in the area, plus our own state departments and the U.S. Fish & Wildlife Service must learn to work together through unit plans for the benefit of wildlife, domestic livestock, and man.

Sincerely,

Robert G. Barthelmess

Robert G. Barthelmess, Chairman
Board of Livestock

RGB:KS:cmk

cc: Keith Kelly

Proposed DNRC Comment on Draft Environmental Impact Statement Charles M. Russell National Wildlife Refuge

Environmental impact is judged by what will happen to the natural resources of soil, water, vegetation, and wildlife as a result of the activities of man and nature. In the case of the Russell Game Range the federal government has decreed man's activities be predominantly that of management for certain wildlife values. First consideration is given to the impact on the soil, water, and vegetation. Prairie dogs will have the most noticeable adverse effect on the soil and vegetation if not carefully controlled. Other proposed wildlife will have lesser effect on the soil, water, and vegetative resources, if carefully managed.

Because habitat is recognized as the key to wildlife abundance and inasmuch as it is the purpose of the Russell Game Range to emphasize habitat quality and quantity rather than wild animal population and densities, this situation occurs now with generally good to excellent condition range.

It seems that the management of the Russell Game Range is in an excellent position to demonstrate to the public, to public land managers, and most importantly to the private sector, the advantages of multiple use management on all grazing lands, public and private, within Montana, and what it takes to do this to produce wildlife on all lands.

The Russell Game Range is situated within and without a mixture of intermingled land ownerships. The local economy as well as statewide is dependent on the domestic livestock as well as the wildlife values. It is almost impossible to separate the management of each. One impacts very much on the other socially, economically, environmentally, and politically. These values must be more realistically evaluated to what

RE: C. M. Russell Gama Ratuga
-2-

is acceptable. To do this it is recommended a strong note of cooperation be addressed with local ranchers, sportsman and organizations.

It is the recommendation of the Conservation Districts Division of the DNRC that the management alternative selected be as near the multiple use concept as possible.

It is further recommended that local Cooperative State Grazing Districts and Conservation Districts establish a closer working relationship on these matters.

The Montana Rangeland Resource Coordination Act is a law which includes a number of agencies and organizations including the Fish and Wildlife Service to resolve management issues. We would recommend further review under this means.

We are impressed with the recommendation of local ranchers in the area that recommend the Gus Hormay rest rotation system. This is a plus for good range management for domestic and wildlife purposes and will go far toward being acceptable socially and economically, as well as environmentally.

21

Response to the State of Montana

1. The EIS is proposing the improvement and maintenance of wildlife habitat capable of supporting an average of 10 deer and 2.5 elk/sq.mi. on suitable habitat. Improvement of these habitats will be accomplished by grazing reductions, prescribed burning, and other management techniques described in the text.
2. We must reiterate that range condition and the condition of wildlife habitat are not synonymous.
3. We agree with your entire paragraph. See CMR goal #11 and the Foreword.
4. According to CEQ Guidelines (Sec. 1502.1 Regulations for Implementing the provisions of the National Environmental Policy Act), the purpose of an EIS is to discuss the impacts on the environment of various alternatives and methods of reaching or attaining certain goals and objectives, not a discussion of the rationale supporting those goals and objectives. Such rationale comes from legislation and Service policy and is contained in program management documents on file in the FWS Lewistown office.

The goals and objectives are generally in priority order. Also see Appendix 1b.

Population goals for various species are, as you say, extensions of data for local areas. These data are not intended to be extended throughout the refuge, but to areas of similar habitats and potentials.

Further attempts to introduce bighorn sheep have been carefully considered and discussed with the Montana Department of Fish, Wildlife, and Parks; the consensus being that it is a worthy objective and should be attempted. See statement on page 45 concerning 1980 bighorn sheep introduction.

See amended range objective #1, page 5.

5. Detailed plans on how FWS goals and objectives are going to be accomplished are beyond the scope of an EIS. These will be spelled out in unit habitat management plans to be developed at a later date (see also Appendix 1b).
6. Objective No. 7 refers to an average of 10 mule deer/mi2 in good mule deer habitat. FWS recognizes that some areas will support more individual animals/mi2 and some less (see page 3, paragraph 6). The objectives do not imply that habitat for every species will be improved over all the refuge. Habitat Evaluation Procedure (HEP) criteria indicate that by managing in accordance with the Proposed Action, habitat conditions will evolve that will support objective levels of wildlife.

7. Highly detailed plans on how FWS meets its mission, goals, and objectives are beyond the scope of an EIS (see answer #4 above). These details will be spelled out in habitat management plans to be developed later. Of the several factors under FWS control which affect habitat on CMR, livestock probably has the greatest impact. See revised Foreword, Appendix 1b, and Appendix 15 for approach used.

8. There is no intention in the EIS to infer that an AUM taken away from livestock will automatically be eaten by wildlife. The EIS deals with total wildlife habitat, not just food (AUMs).

The total habitat requirements include soil productivity, residual cover, interspecific strife between wildlife species, and between wildlife and nonwildlife species, escape cover, etc.; thus, there is no point in assessing 15,000 AUMs of grass as food for antelope and deer.

9. We agree with your comment that wildlife should come first, and intend to manage CMR that way. Note that the plans to be developed are habitat management plans. These plans will be based on HEP criteria (Appendix 2), which spell out the needs of wildlife by species. These habitat plans will be developed on each grazing allotment (or combination of similar allotments) as these are already established, well-defined, geographical areas. The purpose of the habitat plans will be to provide for the year-long requirements of wildlife in one or more allotments.

10. FWS generally agrees with your statement. All references in the Proposed Action to ripping have been eliminated in the final EIS. All farming along the upper reaches of the Missouri River will be phased out. Shrub planting will only be used in rare instances to establish seed sources. Some burning is proposed to help establish shrubs.

11. FWS agrees and that is why the only introductions in the Proposed Action alternative are for peregrine falcons, black-footed ferrets, swift fox, and bighorn sheep, all indigenous species to north central Montana. None of these will be in pens, and all releases will be to either reintroduce a species not now present on the area or to bolster a flagging population.

12. Providing public hunting is part of goal number 9, page 4 and is again provided for under Recreational Objective number 2 on page 6. Public hunting is again stated as an appropriate use under number 5 on page 9. Obviously, population levels for a certain species will have to be at a level that provides a harvestable surplus for that species in order to permit hunting. Listing that level for each species is beyond the scope of this document.

We agree with your observation that the EIS refers to habitat in the Foreword and other places, but the objectives list numbers of wildlife. Numbers were essential for certain species such as peregrine falcons. Also, the habitat that will support say 10 deer/sq.mi. is an indicator of habitat that will support numerous other wildlife species without listing a certain number for each species.

In general, the EIS deals with habitat, but references are also made to specific wildlife numbers, usually as an indicator of the quality of the habitat desired.

13. The decision to manage in a "generally natural setting" is in accordance with the FWS legislative mandates and policies and precluded further water development except where specifically mentioned in the text. Further, in examination of HEP values compiled on allotments on the refuge, it has been concluded that additional water development would be detrimental to most wildlife species in that it would distribute livestock into areas now used almost exclusively by wildlife and that are needed by wildlife.
14. Please see revised Wildlife Objective number 8, page 5, which states that between 5,000 and 10,000 acres of prairie dogs will be maintained. Objective number 2, same page, says that ferrets will be introduced as soon as animals are available. Since it is not known when or if any ferrets will be available, it is not known when an introduction will be made.
15. The idea of a Memorandum of Understanding between the Department of State Lands and CMR concerning grazing has merit; we will pursue this matter as we start developing habitat management plans.
16. The EIS does not propose to dramatically increase deer and elk populations. The EIS does propose, however, the improvement and maintenance of habitat capable of supporting an overwintering population of 10 deer/sq.mi. and 2.5 overwintering elk/sq.mi. in suitable habitat (see page 5, wildlife objectives 7 and 9).
17. The statement is somewhat misleading; see revised text page 43, paragraph 2.
18. The revised livestock economics analysis now takes into account revenue derived from livestock earnings from the CMR. A detailed discussion of livestock economics is provided in Appendix 10. While a few ranchers with high dependency on the CMR will be adversely affected, the FWS does not gather specific information on the other factors you mentioned (indebtedness, etc.) to make a determination of who, if any, ranchers would be forced out of business. This determination depends on sociological as well as economic factors. The EIS does look at the effect of changes in livestock producer spending on the local economy. See Appendix 13 for more discussion on this matter.

19. The EIS is proposing the improvement and maintenance of wildlife habitat capable of supporting an average of 10 deer and 2.5 elk/aq. mi. on suitable habitat. Should depredation problems occur, CMR will coordinate and integrate, where feasible, management of CMR with objectives of federal and state agencies and private land-owners within and around CMR.
20. The subject of predator control has been discussed in two previous EIS's: Operation of the National Wildlife Refuge System, and Mammalian Predator Damage Management for Livestock Protection in the Western U.S. You are correct that range condition has improved, but range condition and wildlife habitat are not synonymous.
21. The FWS will coordinate CMR management when and wherever possible. Also, all private or third party rights associated with inholdings on CMR, will be honored when detailed management decisions are undertaken for individual allotments.

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United States Senate

WASHINGTON, D.C. 20510
December 1, 1980

COMMITTEE ON FINANCE
CHAIRMAN, SUBCOMMITTEE ON THE
OVERSIGHT OF THE INTERNAL
REVENUE SERVICE
COMMITTEE ON JUDICIARY
CHAIRMAN, SUBCOMMITTEE ON
LIMITATIONS ON CONTRACTS
AND DELEGATED AUTHORITY
SELECT COMMITTEE ON
SMALL BUSINESS

Mr. Erwin W. Steucke
Area Manager
Fish and Wildlife Service
Federal Building, Room 3085
316 N. 26th Street
Billings, MT 59101

Dear Wally:

Please find enclosed my statement on the Draft Environmental Impact Statement for the management of the Charles M. Russell National Wildlife Refuge.

As you will note, I am generally pleased with the comprehensive nature of this DEIS. However, I do feel that further attention is needed to the question of livestock grazing on the Wildlife Refuge.

I would appreciate being informed of all further action on the DEIS resulting from public comment.

Thank you for your attention to this matter.

With best personal regards, I am

Sincerely,



Enclosure

cc: Honorable Cecil D. Andrus

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BUTTE
(406) 782-6790

GREAT FALLS
(406) 761-1574
RECYCLED PAPER

HELENA
(406) 449-5450

MISSELA
(406) 729-3643

STATEMENT BY SENATOR MAX BAUCUS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE MANAGEMENT OF THE CHARLES M. RUSSELL NATIONAL WILDLIFE REFUGE

The Charles M. Russell Wildlife Refuge (CMR) represents one of the most valuable federal land holdings in the Western United States. Stretching from the Fred Robinson Bridge in the west down the Missouri River to the Fort Peck Dam in the east, the CMR is imposing.

The scenery and wildlife are diverse. Elk, pronghorn antelope and mule deer roam the bottom lands, river breaks and sagebrush grasslands. Historically, use of the Refuge has been as varied as the topography. Grazing and commercial farming exist together with boating, hunting, fishing and touring.

Under the unified management authority granted the U.S. Fish and Wildlife Service by P.L. 94-223, the goals for the CMR which have evolved from this diversity should continue to be recognized. The management philosophy must recognize the important interplay between the Refuge, its private, estate, and federal neighbors and those with permits to graze their cattle on the Refuge.

The U.S. Fish and Wildlife Service is to be commended for trying to meet its sundry management objectives for the CMR in the Draft Environmental Impact Statement (DEIS) for the management of the Wildlife Refuge which was released earlier this year. The analysis of the current status of the Refuge and the resulting management proposal are significant in the 44 year history of the CMR.

I have just completed my review of the Draft Environmental Impact Statement. My review was supplemented with public comments on the DEIS shared with me by the many Montanans concerned for the future management of the CMR. My primary concern upon completing my study of this Draft

-2-

Environmental Impact Statement is for treatment given domestic livestock grazing. For decades, the propriety of grazing on the CMR has been consistently recognized. Because of the integral role that agriculture plays in the economy of the region surrounding the Wildlife Refuge, the issue of grazing deserves close scrutiny. Thus, before a final management plan is adopted, I am urging the Fish and Wildlife Service to examine further any alternatives for improving wildlife habitat other than the suggested 33 percent cut in animal unit months (AUM) on grazing allotments.

The DEIS recognizes that the Refuge is predominantly in good condition in terms of range vegetation. Only a small percentage (7%) of the CMR is in just fair condition as a result of livestock grazing. The portion of the Range in poor condition is due to prairie dog towns or natural flood plains. Thus, under these circumstances, the utilization of other wildlife habitat improvement techniques should be emphasized before turning to reductions in livestock grazing.

With the continued economic viability of area ranches at stake, the onus is on the Fish and Wildlife Service to exhaust all possible methods of improving range conditions before suggesting the foreclosure of livestock grazing.

As part of this more intensive study, the importance of on-the-ground consultations with ranchers and other land managers must be stressed. While the Fish and Wildlife Service has conducted public hearings and on-site inspections on the CMR, the magnitude of the decision being made warrants further consideration of the management alternatives as they affect agriculture. Those individuals whose livelihoods are directly affected by this management plan may well be able to suggest innovative rangeland and wildlife habitat enhancement methods.

Specifically, the economic impact of this proposed management system deserves greater attention. While the DEIS notes that, on a regional basis, the loss of income is insignificant, common sense argues that the loss of 20,000 AUM's will have real and disastrous consequences for those stockgrowers who are primarily affected. Such an abrupt departure from longstanding management practices must not be entered into lightly.

The additional study I am requesting does not deny the primary focus of the CMR as a wildlife refuge. By virtue of the designation of the area as a refuge, the mission of the Fish and Wildlife Service to protect wildlife habitat is apparent. However, my contention is that livestock grazing is a compatible use for the Refuge. Special protection for riparian regions, soil ripping, controlled burns, cooperative management efforts with area ranchers, and other novel management practices can, in my mind, result in the continuation of grazing at near present levels without serious damage to wildlife habitat.

For their part, area ranchers have long recognized that the protection of the range quality and habitat of the CMR is critical for the long-term success of their operations. Through more intensive consultations, the Fish and Wildlife Service can underscore the necessity for sound and cooperative management practices to ensure the retention of individual allotments on the CMR.

In summary, I recommend the following modifications be made in the management plan for the Charles M. Russell Wildlife Refuge:

1. Alternative methods for the enhancement of wildlife habitat and rangelands should be explored more fully rather than relying upon cuthacks in AUM's.
2. Increased consultation and cooperation with adjacent property owners and area residents should be emphasized in formulating a management plan for the CMR.
3. The management plan should provide flexibility in implementing any management plan to avoid sudden economic dislocation for grazing permittees.
4. The DEIS should be supplemented to more specifically identify the economic impacts of livestock grazing cuts on the surrounding region.

In conclusion, I am convinced that habitat for wildlife can be significantly enhanced without the unfortunate consequences for the area that would result from grazing cuthacks amounting to 33 percent. I stand ready to lend whatever legislative assistance may be necessary to accomplish this end.

Response to U.S. Senator Baucus

1. The economic impact has been reevaluated and the EIS revised (see text and Appendices) to more accurately reflect the economic situation under various alternatives.
2. In the pre-EIS studies, it was determined that current grazing was a primary limiting factor on the enhancement of wildlife habitats on CMR; hence, the alternatives were developed around grazing modifications.
3. Public involvement has been, and will continue to be, emphasized regarding the planning and management of CMR.
4. A phase-in period has been planned to reduce impacts of a sudden dislocation in grazing permittees.
5. See response 1 above.

WILL MELCHER
MONTANA

United States Senate

September 29, 1980

The Honorable Cecil D. Andrus
Secretary of the Interior
Interior Building
Washington, D. C. 20240

Dear Mr. Secretary:

We have just completed a review of your Draft Environmental Impact Statement (DEIS) on Management of the Charles M. Russell National Wildlife Refuge.

The proposals and direction portrayed in the document give us a great deal of concern. While we recognize the reason for preparation of the document by the Fish and Wildlife Service, we believe the alternatives presented fall far short of addressing the issues in need of resolution.

We are in total disagreement with treatment given domestic livestock grazing in the draft alternatives. The Executive Order establishing the Fort Peck Game Range in 1936 clearly recognized domestic livestock grazing as a compatible use on the Game Range. While subsequent legislation placed CMR management completely under the Fish and Wildlife Service, it did not direct that grazing use by domestic livestock be diminished or eliminated or that there were unresolvable conflicts between wildlife and domestic livestock use. The material presented in the DEIS does not present conflicts that cannot be resolved with some minor changes in direction regarding range improvements and some changes in the rather arbitrary goals and objectives outlined on pages 4 and 5 of the document.

Overall range condition in the Refuge is in exceedingly good condition and, with some minor exceptions, there appears to be little conflict between domestic livestock and those classes of wildlife where direct competition for the grazing resource would be expected.

Another shortcoming in the document that we find exceedingly disturbing is the socio-economic treatment given to the grazing reduction impact. The document states that the regional economic effect due to grazing reductions would be insignificant under any of the alternatives. However, in the section assessing the consequences of the proposed action the authors

The Honorable Cecil D. Andrus
September 29, 1980
Page 2

clearly state that, due to a lack of information, a greater number of grazing operators could suffer adverse impacts than anticipated in the analysis.

While we recognize the primary purpose of the Refuge is to benefit wildlife, we recommend the Fish and Wildlife Service supplement the Draft Environmental Impact Statement. The supplement should recognize domestic livestock grazing as a legitimate use of the Refuge instead of treating it as a threat. Evidence does not bear out that past or current domestic livestock grazing is causing serious damage to the wildlife habitat, but evidence does bear out the negative economic impact of the proposed action.

The supplement should provide changes in the goals and objectives to give recognition to domestic livestock grazing and do away with the self-imposed limitation on range improvements for domestic livestock.

A new alternative should be developed which provides for range improvements and improved grazing systems, along with some season of use modifications that would provide enhancement of the overall wildlife habitat without the detrimental effect on the domestic livestock grazing program portrayed in the presented Draft Environmental Impact Statement.

Sincerely,

John Melcher

Response to U.S. Senator Melcher and Congressman Marlenee

1. The goals and objectives were formulated in accordance with FWS policies, regulations, legislative requirements, and public input. Domestic livestock are substantially recognized by first being a positive factor in manipulating wildlife habitat, and secondly, receiving all forage excess to the needs of wildlife.
2. The regional economic effects are insignificant because the relative change on the six county area is a very small percentage change. Thus to the region, there would be no perceptible change in key economic variables such as employment or income as a result of these alternatives. The absolute effect to a few individuals, as measured without reference to the size of the six county area, may be large. While this change is important to these individuals, it does not seriously affect the human environment of the study area because the absolute changes have a small relative effect.
3. The EPA has rated this document LO-1 (Lack of Objection - sufficient information); therefore, the FWS believes the draft document is adequate. Our governing legislation requires that wildlife and wildlife habitat receive primary benefit and that any other activity must be compatible with wildlife.
4. The FWS believes that Alternative D (Multiple Use) proposes to use livestock grazing in the manner you suggested. However, this alternative will not achieve wildlife objectives.



The Big Sky Country

MONTANA STATE SENATE

SENATOR MARK ETCHEART
DISTRICT NO. 2
GLASGOW, MONTANA 59230
HELENA ADDRESS:
705 4TH AVE.
442-4377

Box 229
Glasgow, Mt. 59230
October 30, 1980

COMMITTEES:
FINANCE AND CLAIMS
HIGHWAYS AND TRANSPORTATION
NATURAL RESOURCES

TESTIMONY GIVEN AT U.S. F&W HEARING GLASGOW, MT. OCTOBER 30, 1980

ON DRAFT ENVIRONMENTAL STATEMENT ON MANAGEMENT

OF CHARLES M. RUSSELL NATIONAL WILDLIFE REFUGE.

My name is Mark Etchart. My interest in the management of the CMR is as an elected official representing Senate District 2 and as a rancher who runs livestock on the Game Range.

Since the hearings handout instruct us that "witnesses must direct their testimony to the contents of the document and to specific aspects of the proposed CMR management proposal or alternatives to the proposal" a citizen testifying at this HEARING is given the choice of 5 bad options and is being asked which one he likes the least. Those of us who have participated on every chance we could get to provide input to this draft EIS have the feeling our opinions have been given very little consideration thus far.

Of the proposed alternatives the only one which would be ACCEPTABLE is the "No Action Alternative" because it is the only one which would not do considerable damage to the local economy. It specifies that livestock numbers would not change and I think that this provision should be incorporated in whatever final action is taken. We have developed a system of management on the CMR whereby valuable livestock forage is utilized to produce a product which provides our people with a high quality nutritious food from a renewable resource which would otherwise be largely wasted. This production is badly needed at this time to help our balance of trade by holding down meat imports which are a drain on our economy at a time when we are being hurt badly by other necessary imports such as crude oil, and strategic minerals vital to the maintenance of our technological society.

Also we have had good hunting and recreational opportunities on the CMR. We have found that if we control the coyote we can raise a tremendous amount of game on the federal and private lands. Provide opportunities for boating, hiking, horseback riding, camping, fishing, and generally enjoying the outdoors while still utilizing the forage production to raise livestock



The Big Sky Country

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which generate new wealth which has a multiplier effect of 5 to 1 as far as the rest of the economy is concerned. These livestock generate taxes to support our county government, and educate our school children. They provide jobs in town for local business. With our national economy in such a shambles we should deliberate long and hard before taking action which hurts our workers, our businesses and raises the price one of our basic food products.

The proposed Action Alternative would penalize Etchart Ranch heavily by reducing our livestock grazing on the CMR by 47%. And mind you this is on range which was shown to be 97% good to excellent in condition by Fish and Wildlife range surveyors. If a tremendous cut like that actually is enforced we would only be allowed to graze about 17% of the available forage. This is wasteful, not necessary for game production and serves absolutely no useful purpose unless one considers stopping livestock grazing a useful purpose.

The economic data presented is misleading as to the real affect. Losses in livestock production are shrugged off as a small percentage figure of the total economy using bust year prices as the basis, and other benefits are balanced by using dollar amounts accumulated over several years. This draft EIS has to be the weakest document I have seen in a long time in the quality of the economic analysis that went into it.

Northeast Montana is vitally interested in the future management of the CMR. We cannot let this valuable resource be taken over by the prairie dog and the coyote when we have people in the cities who already feel that they are paying much too much for food at the present time. Good judgement point to the NO ACTION ALTERNATIVE as the only one which should be considered.

Thank You

Mark Etchart
Mark Etchart
State Senator District 2

Response to Montana State Senator Etchart

1. The regional economic effects are insignificant because the relative change on the six county area is a very small percentage change. The absolute effect to a few individuals, as measured without reference to the six county area, may be large. See also the revised economic evaluation in the text and appendices.



AMERICAN WILDERNESS ALLIANCE
4260 East Evans Avenue • Suite 8 • Denver, Colorado 80222
(303) 758-5018

December 4, 1980

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Mr. Wally Steucke, Area Manager
U. S. Fish and Wildlife Service
Federal Building, Room 3035
316 North 26th Street
Billings, Montana 59101

Dear Mr. Steucke:

This is to comment for the official record on the Fish and Wildlife Service's Master Plan for the Charles M. Russell National Wildlife Refuge.

The American Wilderness Alliance is a Western-based national non-profit organization dedicated to promoting the conservation and wise use of the nation's dwindling wilderness, wildlife habitat and wild river resources. Many of our Montana members are familiar with the Charles M. Russell National Wildlife Refuge. As a native Montanan, I have visited the Refuge on numerous occasions throughout the past 30 years.

We greatly appreciate efforts of the Fish and Wildlife Service, as expressed in the Master Plan, to address and resolve some of the problems that have plagued the Wildlife Refuge for many years and kept it from once again becoming the great wildlife mecca known in early pioneer days.

Here are our more specific comments regarding the Plan:

Grazing

We strongly support the decision of the Fish and Wildlife Service substantially to reduce domestic livestock grazing in the Wildlife Refuge. Livestock grazing has continued through the years to dominate use of the Refuge, despite the fact that the original order establishing the area provides that wildlife shall receive primary consideration. From our own repeated observations and knowledge, severe overgrazing by livestock has continued to depress the numbers and quality of wildlife on the Refuge, especially such species as elk, bighorn sheep and grouse which depend heavily on a grassland habitat throughout their life cycles.

We urge that the Fish and Wildlife Service go further, however, and adopt an alternative to use livestock grazing as a management tool to be administered selectively on a prescription basis in order to obtain the best possible wildlife habitat conditions.

Mr. Wally Steucke

-2-

December 4, 1980

Also, we find very little in the Plan to indicate how the Fish and Wildlife Service concluded, on average, that livestock grazing should be reduced by one-third. More specific information on this subject should be provided. Perhaps such information would support a 40 per cent or 50 per cent reduction. Who can tell from the lack of data presented?

Wildlife Reintroductions

The Alliance wholeheartedly endorses that part of the Plan which provides for the re-introduction of bighorn sheep, black-footed ferrets, swift foxes and peregrine falcons to the Refuge. Moreover, conditions as nearly ideal as possible should be established and maintained on the Refuge for each species to assure its successful re-introduction and perpetuation.

Farming

We support, too, phasing out farming activities along the bottomlands of the Missouri River in the Refuge. This would benefit most wildlife and restore natural integrity to the wildlife setting.

Manipulation of Habitat

The American Wilderness Alliance is unalterably opposed to ripping (plowing) up to 10,000 acres of the Refuge to improve vegetative productivity. This is an artificial practice that is in contradiction with the purpose for which the Refuge was established—to protect and enhance wildlife populations in a natural setting. As Aldo Leopold wrote in the 1930's, when you remove the wild, natural habitat from wildlife, you no longer have wildlife management. You have animal husbandry. Substantial reduction in livestock grazing on the Refuge will increase and maintain much greater vegetative productivity in general for wildlife, without destruction of natural values.

Predator Control

Finally, we respectfully request that the Fish and Wildlife Service Master Plan contain clear direction that predator control shall occur only when absolutely necessary, for example, when it is essential to safeguard threatened or endangered species. There should be no routine elimination of predators to benefit livestock. If ranchers desire to graze livestock on the Refuge, they must be willing to accept the risk of predation. The consideration of all wildlife should come first, as legally required.

Thank you for the opportunity to comment on this important matter.

Sincerely,

Clifton R. Merritt
Executive Director

CRM:lw

cc: Senator Max Baucus

Response to American Wilderness Alliance

1. Grazing is to be used as a management tool under the Proposed Action. Each allotment will be evaluated and grazing prescribed to achieve desired habitat responses. The Intensive Wildlife Management alternative also specifically provides for prescription grazing to benefit wildlife.
2. The amount of forage available to livestock was computed on a section-by-section basis. Since there are over 1,000 sections on CWR, a listing of the tabulation of each is beyond the scope of this document. The 32.6 percent reduction is an average of the reductions applied to these sections. See revised Appendix 15. This amount of reduction generally fulfilled the requirements for wildlife (see Appendix 1b).
3. Preventive predator control or wholesale control are prohibited on CWR. Control of the offending predator is, however, permitted on CWR upon documentation by Animal Damage Control personnel.



ANIMAL PROTECTION INSTITUTE OF AMERICA

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TWX 910 387 2375 APR SAC

November 18, 1980

Wally Steuke
Area Manager
U.S. Fish and Wildlife
Service
Federal Building
Room 3035
316 North 26th Street
Billings, MT 59101

Dear Mr. Steuke:

On behalf of the Animal Protection Institute's over 100,000 members, I would like to urge you to restrict grazing in the Charles M. Russell National Wildlife Refuge. We are aware that local livestock interests are asking for increased grazing privileges within the refuge, but we feel that the granting of their demands would seriously jeopardize the endangered species recovery programs as well as the natural character of the refuge.

API particularly objects to management of grassland areas by plowing, spraying herbicides or planting non-native vegetation in order to favor certain "game species" to the detriment of others. We are particularly concerned about the future of the black footed ferret, peregrine falcon and the northern swift fox.

We request that you restrict cattle grazing in the refuge for we have reports that overgrazing is rampant and is starting to bring about a decline in natural value in CMR.

I would like to be kept informed on any upcoming decisions.

Sincerely,

Crisis C. Downes
Crisis C. Downes
Research Services

CCD:rb



U.S. Office:
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ALL CONTRIBUTIONS ARE DEDUCTIBLE FOR INCOME AND ESTATE TAX PURPOSES

Response to Animal Protection Institute

1. During the habitat evaluation phase of the planning process, it became apparent that many species had similar habitat requirements. Rather than selecting an animal with little literature available and not easily recognized by the public, game species were selected, among others. The habitat components necessary for these animals also fit the habitat components necessary for a large number of non-game wildlife also.

Defenders OF WILDLIFE

Mr. Wally Steucke--page two

This stated policy makes two very important points. First of all, grazing should either be beneficial or neutral to wildlife and wildlife habitat before it can be authorized. Secondly, the FWS must be able to demonstrate that it's beneficial or neutral. A national wildlife refuge should be one place where the wild animals needn't bear the burden of proof.

It's in the context of these preliminary comments that Defenders of Wildlife will make its more specific comments on the CMR Master Plan.

The DEIS presents a great deal of information which substantiates the chief complaint of conservation interests: livestock grazing has had, and is having, a substantial adverse impact on the CMR's wildlife. The DEIS clearly demonstrates that livestock grazing is presently preventing the refuge from fulfilling the objectives for which it was established.

These statements begin on page ix and permeate the document. Page ix, paragraph 2 reads, "Wildlife habitat on the refuge is only in fair condition. Present deficiencies in habitat include lack of residual cover (grasses and forbs) on upland sites, around ponds and in hardwood draws, poor quality and small quantity of deciduous shrubs and trees in hardwood draws and along minor stream courses, poor quality sagebrush stands and insufficient timber density in some areas." On page 16, it's noted that riparian zones, undoubtedly the most productive wildlife zones in arid regions, are considered "sacrifice areas" on the CMR because of cattle concentrations. On page 26, paragraph five, the FWS readily acknowledges that the present situation does not provide a wildlife refuge situation, that livestock grazing is equal to or above wildlife for resource allocations. On page 63, we get some of the specific impacts livestock grazing has had on individual species. Cattle in the Two Calf area are depressing bighorn populations; grazing is holding sharptail grouse production far below what it could be; grazing around ponds and other waterfowl areas has kept waterfowl production far below what it could be; mule deer and antelope suffer from insufficient forbs; livestock grazing and trampling of browse species has caused a downward trend for deer and grouse. On page 65, the FWS illuminates another glaring problem: forage on the most favorable locations on the refuge have always been allocated almost solely to livestock, while the extremely rugged and dry areas have been given to wildlife.

In sum, the DEIS makes a strong case for reducing livestock numbers on the CMR. Given these findings, one would then logically expect to find a reasonable range of alternatives detailing how these livestock reductions might take place. This is where the DEIS falls short; instead of providing several workable alternatives, the FWS provides only one viable option. The others only tend to distract the reader's attention.

Alternative A, the No Action Alternative, calls for keeping things the way they are. Given the FWS admission that the current situation does not reflect a national wildlife refuge situation, that alternative would appear not only undesirable, but illegal as well. Further, given the public's dissatisfaction with past wildlife management, it obviously isn't a viable option. When Congress gave the FWS sole management authority for the CMR in 1976, it did so with the understanding the CMR would finally be managed as a wildlife refuge. This mandate is clearly defined in the legislative history of P.L. 94-223.

Alternative C, the Intensive Wildlife Management alternative, would require not only new legislation, but large budget increases that are highly unlikely.

Defenders OF WILDLIFE

December 1, 1980

Erwin W. Steucke, Area Manager
U.S. Fish and Wildlife Service
Federal Building, Room 3035
316 N. 26th St.
Billings, MT 59101

RE: Draft Environmental Impact Statement, Management of Charles M. Russell National Wildlife Refuge.

Dear Wally,

I have read the CMR Master Plan and wish to submit the following comments on behalf of Defenders of Wildlife, a national conservation organization with a longstanding interest in the National Wildlife Refuge System and its proper administration.

Our organization appreciates the opportunity to have been closely involved in the planning process that preceded the issuance of this document. I have personally toured the refuge on several occasions, and seen many of the problems first-hand. Fish and Wildlife Service personnel have made themselves readily available to answer all questions and requests, and have done as much as possible to encourage public participation. From a public involvement standpoint, the FWS has done a first class job, and that's very important.

The CMR is one of the most prestigious units of the National Wildlife Refuge System; it's not only the second largest refuge in the continental U.S., but also contains a diversity of habitats and wildlife. Because of its high viability, the management direction for the CMR will tend to set policy for other refuges across the country. Therefore, management on the CMR must always be considered in a national context, and decisions should be made with the best interests of all U.S. citizens in mind, in accord with established law, regulations and policies for the national wildlife refuge system.

Since grazing is probably the key issue of the CMR Master Plan, I would like to reiterate FWS policy on secondary economic uses of the refuges. This policy was made very clear in the 1979 "Final Recommendations on the Management of the National Wildlife Refuge System." Task Force Recommendation 14 stated, "Grazing, timber harvesting and agricultural practices may be abusive and should only be used when necessary for proper management of wildlife resources, keeping in mind the desirability of maintaining natural ecosystems."

Assistant Secretary Herbst agreed with the recommendation, and further added: "The Service's implementation should show on a reasonable basis that these management practices are employed for the benefit of and are not harmful to wildlife and wildlife habitat... Without exception, any economic uses of the NWRs must be demonstrably compatible with Service objectives to preserve, protect and enhance wildlife habitat."

Defenders OF WILDLIFE

Mr. Wally Steucke--page three

Further, this alternative calls for such a level of manipulation and management that it would go directly against the CMR's mission statement, which calls for the area to be managed and preserved in a "generally natural setting."

This alternative was highly disappointing, as it should have been the one where the FWS could have formulated the ideal management direction for wildlife, and then allowed public comments to take over. The one part of this alternative that does deserve consideration is the part that deals with grazing. Under this alternative, grazing would be used as a tool to achieve or maintain desired wildlife habitat. This approach makes much better sense for a wildlife refuge than a system that permits routine grazing without consideration of overall grazing impacts.

Alternative D, the Multiple Use alternative, has no logical place in this DEIS, as it's clearly improper for a national wildlife refuge. By inserting such an alternative many people are led to believe that it's really a live option.

Alternative E, the No Grazing alternative, would be very difficult to administer because of the numerous state and private inholdings. While this alternative obviously would be very beneficial to many species of wildlife, it could serve to reduce other populations. To the extent it can be demonstrated that livestock grazing is beneficial to particular seral species, it should take place.

That leaves us only with Alternative B, the alternative proposed by the FWS. Alternative B is a reasonable alternative, but only one of many management alternatives. By making the other alternatives so unattractive, the FWS leaves the public with little choice. It's like throwing darts at a board, and then drawing rings around where they hit. It makes it appear that the FWS has already determined what action it wants to take, and is now going through the motions of receiving public comment.

The FWS Proposed Alternative isn't without problems. First of all, not enough information is presented for citizens to make informed decisions about what the best level of grazing might be. I've followed the FWS process closely, and I'm not able to deduce the precise methodology which the FWS has used to determine appropriate grazing levels. It follows, then, that I'm unable to tell whether the proposed reductions are enough, or too much.

The preferred alternative seems to be predicated on a "light grazing" scenario that was established by a single scientific paper and then reinforced by cronies at the National Bison Range. This doesn't seem like the level of rigorous scientific documentation that the central thesis of any plan should have.

What the preferred alternative does, to the best of my understanding, is to take reductions based on steepness of slopes and distance from water. This is based on the assumption that cattle can't use these areas. What the preferred alternative serves to do, then, is to concentrate the cattle on the flat areas near water--certainly prime areas for wildlife as well as livestock. On page viii, the DEIS states that riparian zones provide one of the most important and productive wildlife habitat types. It further states that this type of habitat is in short supply on the CMR. To the extent that the proposed action fails to acknowledge the riparian zone conflicts, one can expect that habitat to remain sub-par.

The DEIS does not make it clear that much of the refuge cannot be used by cattle because of ruggedness and distance from water. This is why so much of the range is in good to excellent condition. The conflict between wildlife and livestock probably exists on only about 10% of the refuge, but these are the core areas for wildlife production.

Defenders OF WILDLIFE

Mr. Wally Steucke--page five

Predator Control

Even though this issue has caused considerable controversy in the past, the DEIS essentially sidesteps it and fails to give predator control the in-depth discussion it deserves. The public feels very strongly about killing wildlife on a national wildlife refuge in order to protect livestock. As it stands, the proposed action regarding predator control in the DEIS directly contradicts stated FWS policy. In "The Final Recommendations on the Management of the National Wildlife Refuge System," Assistant Secretary Herbst states, "Animal control will be undertaken only to assure balanced populations consistent with proper management of refuge habitat. In no instance should control programs be based solely on a need to alleviate damage to economic users, such as farmers or grazers." (my emphasis) The proposed action obviously needs to be brought into conformity with FWS policy.

Soil Ripping

The proposed alternative calls for the ripping of as much as 10,000 acres of prairie in order to improve vegetative diversity. We oppose this proposal for at least two reasons. First of all, it disregards the mission statement of the refuge, which calls for generally natural management. This type of manipulation is aesthetically displeasing. Secondly, this plan spots which the FWS proposes to plow up may have value of their own. While they may not be important from a vegetative standpoint, they may be important strutting grounds for grouse, or they may be good mousing areas for raptors or other predators. Simply stated, we may not appreciate what good they are. Besides, more is not necessarily better; we need diversity, even if we don't understand it.

Cabin sites

The Proposed Alternative calls for retention of cabin sites on the refuge. From refuge policy standpoint, recreational homesites seem highly inappropriate, and probably illegal. In some instances they may conflict directly with wildlife. The FWS should be phasing out the cabins, as the Forest Service is doing on our National Forests.

Range improvements

We agree with the FWS statement on page 9: "Water developments, fencing, farming, etc., are generally inconsistent with wildlife goals and will only be used when wildlife objectives cannot be achieved through other measures." Generally, range improvements have done far more to hurt wildlife than they have to help it. We also strongly agree that FWS funds should not be spent on livestock where wildlife benefits can't be identified. Livestock management has eaten up too much of the refuge's budget in the past.

Environmental Education

Although this is one of the primary missions of the refuge system, the DEIS pays environmental education scant attention. A major problem with the CMR is that many people don't understand what a treasure it is. They don't know about its rich history or its incredible wildlife diversity. The refuge needs much more than a token tour route. It needs some tasteful, inobtrusive displays and a heavy dose of publicity. The CMR needs to come out of hiding.

Road Management

This is another controversial issue that received little attention in the DEIS. Vehicle traffic needs to be restricted to the minimal amount needed for people to visit the refuge, without unduly affecting the wildlife resources. This is an extremely important part of refuge management, and the FWS should consider a separate travel plan of the CMR which would be available for public review.

Defenders OF WILDLIFE

Mr. Wally Steucke--page four

This problem gets to the core of the deficiencies of not only the proposed alternative, but of the entire DEIS: the analyses of the various alternatives are too generalized and non-specific. The CMR is an extremely large and diverse refuge, but the DEIS would lead us to believe the refuge is rather homogenous. Particularly, the proposed action fails to address the critical problem of how to resolve livestock-wildlife conflicts on the prime areas, such as the riparian zones and other flat places near water. The proposed action calls for routine grazing, on a year-in and year-out basis, without clearly demonstrating that such grazing will be beneficial or neutral to wildlife.

A prescription grazing system, such as proposed in the Intensive Wildlife Alternative, would be a more logical and far more predictable means of reaching the stated Wildlife goals for the CMR. The option of retiring allotments in order to form several no-grazing areas, and then rotate these areas also has some appeal. If the rest periods were of sufficient length, this might be the way to best avoid making riparian zones "sacrifice areas."

In sum, while the Preferred Alternative seems to be a step in the right direction, Defenders of Wildlife strongly feels that the philosophy and methodology underlying the alternative are not consistent with a wildlife refuge situation. Basically, the preferred alternative allows routine grazing to continue, and glosses over the obvious conflicts in the prime areas near water. Only through a prescription system or a rotation system with long rest periods could such conflicts be eliminated.

There are many other specific parts of the DEIS that deserve comment. Since no particular alternative in the statement concurs with our views, I'll comment specifically on certain issues.

Endangered Species Reintroduction

Since one of the primary mission of the refuge system is the recovery of threatened and endangered species, it's only logical that reintroduction of species like the peregrine, swift fox, black-footed ferret and bighorn sheep should be considered. We strongly support these reintroductions. We further feel that an objective review should be undertaken of the feasibility of reintroducing bison. If bison are feasible on the National Bison Range, certainly it's possible on the CMR. The pros and cons need to be weighed, and the public should be involved in the question of whether we want, need or can afford bison on the CMR.

Farming

We strongly support the phase-out of farming along the Missouri River bottoms. These operations not only detract from the otherwise natural setting of the river, but also fail to pass the test of being neutral or beneficial to wildlife. While these operations may benefit non-native species like turkeys and pheasants, they take away highly important food and cover from other native species. Ungulates in particular need thick, riverbottom habitat to afford relief from harsh winter conditions.

Fire Management

We support the fire management in the proposed alternative, that would allow prescription burning as well as some natural burns. Fires have always been an integral part of the prairie ecosystem, and are largely responsible for the diversity of habitat found on the refuge.

Defenders OF WILDLIFE

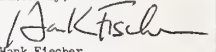
Mr. Wally Steucke--page six

Corps-FWS Jurisdictional Problems

This question has serious overtones to overall CMR management, yet it receives only scant attention. We feel that the FWS should aggressively seek to resolve jurisdictional disputes with the Corps of Engineers before this problem erupts again, and threatens the refuge.

Thank you in advance for the consideration of these views; while some of our complaints are fundamental in nature, many of the comments are specific and we're hopeful that the FWS will make appropriate changes in the FEIS. If you or your staff has any questions about these comments, please contact me.

Sincerely,


Hank Fischer
Montana representative
304 East Franklin
Missoula, MT 59801

cc: Max Baucus
John Melcher
Ron Marlenee

Response to Defenders of Wildlife

1. The FWS considered five alternatives including two not within its augmentation authority (as per CEQ regulations). Three of the five alternatives detail how livestock reductions might take place.
2. The text of Alternative C, Intensive Wildlife Management, in view of public comment and further evaluation, has been rewritten to reduce some of the more costly elements (fencing and land acquisition) while retaining the intended purpose expressed in the name of this alternative.
3. The amount of forage available to livestock was computed on a section-by-section basis. Since there are over 1,000 sections on CMR, a listing of the tabulation of each is beyond the scope of this document. The 32.6 percent reduction is an average of the reductions applied to the sections. See also revised Appendices 1b (new), 2, and 15 for methodology.
4. CMR habitat was evaluated on a section-by-section basis and actions prescribed for each. See response #2 above.
5. FWS experience has shown that bison management by a government agency is both difficult and expensive. Therefore, use of bison to manipulate vegetation for wildlife was not selected for the Proposed Action. The FWS will work with any permittee who proposes to substitute bison AUMs for cattle AUMs in a CMR allotment. Bison reintroduction is included in the Intensive Wildlife Management alternative.
6. Predator control has been fully addressed in the FEIS-Mammalian Predator Damage Management for Livestock Production in the Western U.S., and also in the FEIS-Operation of the National Wildlife Refuge System.
7. After reviewing public comment and reexamining pertinent research, the FWS has concluded that soil ripping is not a viable manipulative technique for habitat management on CMR. All references to ripping have been deleted from the Proposed Action.
8. The cabins are under the authority and are leased from the Corps of Engineers on designated areas.
9. Plans in the Proposed Action provide for as much development and activity in wildlife interpretation and education as our projections indicate there will be demand for in the foreseeable future.

10. Road access and travel has been addressed in the planning and EIS. A copy of the access map is available from the refuge headquarters in Lewistown.
11. FWS and COE are working together under a Memorandum of Agreement and will continue to work together to resolve all future conflicts.



ECOLOGY CENTER OF SOUTHERN CALIFORNIA
Project of Educational Communications, Inc.
P.O. Box 35473, Los Angeles, CA 90035

Telephone: (213) 559-9160

October 12, 1980

Mr. Erwin Steucke
Area Manager
U.S. Fish and Wildlife Service
Federal Building
Room 3035
316 North 26th Street
Billings, MT 59101

Dear Mr. Steucke,

The members of the Ecology Center of Southern California are concerned that the one-million acre Charles M. Russell National Wildlife Refuge management plan will not adequately protect the wildlife species in this habitat.

While the preferred alternative is a step in the right direction it seems to call for too much artificial habitat manipulation. We are glad that grazing has been cut by 33% but overgrazing will still occur and thus reduce the necessary forage and cover for the deer, elk, antelope, bighorn sheep and other species in the area. Our wildlife refuges is not the place to allow grazing if it hinders the protection of the flora and fauna.

We look forward to hearing of your revision of the Environmental Impact Statement on this matter.

Sincerely,

Nancy Pearlman
Executive Director

NP:ez

November 15, 1980

Erwin W. Steucke, Area Manager
Fish and Wildlife Service
Federal Building, Room 3035
316 North 26th Street
Billings, Montana 59101

Dear Sir:

The purpose of this letter is to formally voice the opposition of the Fort Peck Cabin Association to Alternative C in the Draft Environmental Impact Statement.

There is no one that has a greater love for animals than yours truly but there are a lot of "human animals" in this area that really haven't much to look forward to in the summer but to get back out to the cabin (if they are not already living there year round as some are) as that is really all the activity there is around this area. We are a small town and do not have all the activities that are offered in the larger cities.

Before any serious thought is given to dispose of the cabin area, someone had better come up with an alternative plan for the local citizens to have if they can't have their cabins.

Respectfully yours,
FOR THE FORT PECK CABIN ASSOCIATION

Wilma Bosh, Secretary
Box 251
Glasgow, Montana 59230

Response to the Fort Peck Cabin Association

1. Under the Proposed Action, the cabins will remain. For action under the Intensive Wildlife Management Alternatives, see revised text page 81.

GARFIELD COUNTY COMMERCIAL CLUB

JORDAN, MONTANA 59337
November 12, 1980

Erwin W. Steucke, Area Manager
Fish & Wildlife Service
Federal Bldg., Room 3035
316 North 26th Street
Billings, Montana 59101

Re: Draft Environmental Impact Statement on the Management of
Charles M. Russell National Wildlife Refuge

Dear Sir:

On behalf of the Garfield County Commercial Club, I am writing this letter to you to indicate our position on the Draft Environmental Impact Statement on the Management of the Charles M. Russell National Wildlife Refuge. The following are our thoughts concerning the DEIS:

1. Our biggest concern with the proposed action as set out in the DEIS is the possible severe economic effect it will have on Garfield County. It is admitted in the DEIS on page 79 that the proposed action will have high adverse impacts on at least 6 livestock operators. Our conversations with the various land owners which would be effected by the proposed action indicate that almost every major land owner would be adversely affected. The 33% reduction in AUM's will undoubtedly not only drastically reduce most of the land owners income but will also have an adverse economic effect on the rest of the economy in Garfield County. With the severe economic conditions that have plagued the farmers and ranchers in the past two years, this type of a reduction could be catastrophic. This is especially true since most of the ranches are running on a high debt and have a very low profit margin. Obviously we realize that the main goal in the management of the CMR is to manage the wildlife and the game refuge. However it is our position that such a severe economic blow to the various ranchers should be justified by a clear need for the proposed action. From our analysis of the DEIS it does not appear to us that there is a clear need for the proposed action.

2. The main thrust of the DEIS seems to be to the effect that the condition of the wildlife habitat in the CMR is currently of only fair quality. The goal of the proposed action seems designed to increase the quality of the habitat from good to excellent by the year 2000. We would submit to you first of all that there is nothing in the DEIS which would indicate that the CMR is currently over-stocked with livestock and that this is what has caused the poor quality of the habitat. The biggest problem in the past with the CMR seems to have centered around the fact that livestock grazed more intensively around the watering areas. The reduction of the AUM's is not going to decrease this problem in any way. We would submit that the best alternative would be to develop further water projects and also put in more cross fences.

Jordan, Garfield County, Montana, Southern Gateway to the Charles M. Russell National Wildlife Range and Hell Creek State Park. The Center of Eastern Montana's Agricultural and Livestock Industry and The Heart of The World's Finest Deer and Antelope Hunting. Home of ancient Fossils.

Erwin W. Steucke
November 12, 1980
Page 2

Secondly we would contend that there is no justification in the DEIS for the increase in wildlife AUM's from the current level of 50,000 to 69,000 AUM's in 1985 and 74,000 AUM's in the year 2000. There is nothing in the DEIS which indicates that the wildlife numbers are currently inadequate. Further there is no reason given why wildlife numbers should be increased. Therefore we would ask that you justify to us why there needs to be 74,000 wildlife AUM's in the year 2000.

3. We would also object to the proposed action alternative in terms that it does not meet the stated goals of the CMR as set out in pages 4, 5, and 6 of the DEIS. The basic goals of the CMR appear to be the management of the wildlife on the game refuge in a state similar to that which existed a hundred years ago. The DEIS seems to address itself mainly to the maintenance of certain species of wildlife as well as the increase in the numbers of certain types of wildlife. The basic theory of the proposed action alternative seems to be that the improvement in the grazing conditions from good to excellent will somehow cause a big improvement in the quality and quantity of wildlife on the CMR. We would contend that this basic conclusion of the proposed action is erroneous for at least two reasons. The first is that there is no clear foundation given in the DEIS which would indicate that the current habitat conditions have discouraged the wildlife in any manner. Secondly it is fairly apparent from talking to land owners on the CMR that predators are the biggest problem in terms of keeping and maintaining wildlife. It seems incredible that the proposed action alternative fails to address itself to this problem at all. On page 65 under the consequences of the no action alternative, it is admitted that coyotes do have an effect on certain wildlife populations. It seems amazing to us that the managers of the CMR would rather cut the AUM's of the land owners and thereby cause them serious economic disadvantages rather than institute a program of killing predators. It is our contention that the DEIS is deficient in this respect and that at the very least further study should be given to the predator factor.

4. Finally we would like to point out that the proposed action alternative will most definitely cause a serious adverse reaction from various land owners. In the DEIS there is some discussion concerning the fact that the introduction of certain types of wildlife including elk and the Rocky Mountain Bighorn Sheep was impeded because of adverse land owners attitudes. It would appear to us that the managers of the CMR should be interested in what the land owners attitudes are going to be to the various management alternatives. If the managers of the CMR are interested in introducing certain species of wildlife and in maintaining those species, it would only seem logical that they should try to get the assistance of the various land

Erwin W. Steucke
November 12, 1980
Page 3

owners. It is our contention that this proposed action alternative would be a step in the opposite direction and that it will most likely jeopardize the introduction of any new species of wildlife.

Overall it is our conclusion that the proposed action does not meet the goals of the CMR and would have serious adverse effects not only upon the economy of Garfield County but also upon the future management of the CMR. Therefore we would respectfully submit that the no action alternative would be the best alternative at this time. We would also suggest that certain changes could be made in the management of the CMR including the development of further water projects, the building of more fences and a much more intensive effort to control the predators. These types of changes would have a much better overall effect on the management of the CMR and would have more advantages to everyone concerned.

Sincerely,

Nick Murnion
Nick Murnion, Secretary
Garfield County Commercial Club

NCM/crm

cc: John Melcher
Max Baucus
Ron Marlenee
Pat Williams
Sec. of Dept. of Interior

Response to the Garfield County Commercial Club

1. The impacts to the ranchers in Garfield County, are on an average not severe. Generally, changes in income and sale are in the range of 3 to 7 percent. It is true that all ranchers will be affected, but the changes to the ranchers of Garfield County are not substantial. Only the few high dependency ranchers would be seriously affected.
2. In examination of HEP values compiled on allotments on the refuge, it has been concluded that additional water development would be detrimental to most wildlife species in that it would distribute livestock into areas now used almost exclusively by wildlife and that are needed by wildlife.
3. Evaluation of wildlife habitat in the initial portions of the EIS process showed some serious shortcomings in the quality of wildlife habitat (see Appendix 2). The shift in wildlife AUMs will improve this habitat. CMR is a wildlife refuge, and wildlife receive highest priority. This is stated in the Executive Order establishing CMR, and in the Refuge Administration Act. Page 5 gives the wildlife objectives.
4. The FWS acknowledges that predators may influence other wildlife populations; however, the FWS also recognizes that predators are wildlife and important in natural management. High quality habitat will support more wildlife than mediocre habitat even with relatively high predator populations.
5. The Proposed Action will, in the judgement of FWS, allow the refuge to meet its objectives and provide stability to permittees. The FWS will continue to coordinate and integrate its management objectives whenever feasible with those of its neighbors.

Jordan, Montana 59337
December 1, 1980

Mr. Erwin W. Steucke, Manager,
Fish & Wildlife Service
Federal Building, Room 3085
316 North 26th Street,
Billings, Montana 59101

Dear Sir:

After reviewing the draft of the Environmental Impact Statement on the Charles M. Russell National Wildlife Refuge, the Garfield County Commissioners believe the adoption of the no action alternative would be in the best interest of the county and its residents. Thank you,

Arthur W. Larson
Arthur W. Larson, Chairman
Kenneth A. Coulter
Kenneth A. Coulter, Member
Carl M. Hallberg
Carl M. Hallberg, Member
Garfield County Commissioners.

*Clerk & Rec
Garf Co Commissioners
P.O. Box 7*

Garfield - McCone Legislative Association

BRUSETT, MT 59318

Phone 406-557-6182

Erwin W. Steucke, Area Manager
Fish & Wildlife Service
Federal Building, Room 3085
316 N. 26th Street
Billings, MT 59101

To be entered as written testimony.
Reference-- EIS-CMR Nat. Wildlife Refuge.

After thoroughly reviewing the entire EIS statement we are in complete disagreement with all of the four alternatives. No. (1) would be disastrous to the entire area, including the surrounding public and privately owned lands. You cannot let prairie dogs and coyotes roam unchecked and expect the economies of the surrounding counties to continue at a normal rate.

Alternative NO.(2) as well as No. (4) is not a true evaluation of conditions on the game refuge and neither proposal would be of benefit to wildlife or grazing of livestock. The Indian and buffalo has proven to intelligent men that grass is an increaser and browse is a decreaser when the grass is not properly utilized. Neither proposal allows for the proper utilization of grass.

Multiple use as defined in Alternative No. (3) is not, in common sense, multiple use and should never have been defined so deceptively in the existing document.

The increase in prairie dogs cannot be justified under Executive Order 7509 which calls for protection and improvement of grazing lands and natural forage.

Executive Order 7509 also says that "nothing herein contained shall restrict prospecting, locating, developing, entering, leasing, or patening the mineral resources of the lands under the applicable law".

The study team determined that the federal government is subsidizing AUMs on the CMR. A VERY FALSE STATEMENT. The revenue into the U.S. treasury in 1979 for the 56,524 AUMs of grazing on CMR amounted to \$106,850.00. The six counties involved got back \$15,133.00. It does not include an explanation of the difference in conditions under which federal, state and private AUMs are leased to provide a fair evaluation of the worth of AUMs under different Landlords.

The study team were incapable of giving a fair evaluation of an AUM on the CMR. They considered the value of dollars taken into the FWS only. The true value of an AUM should include the value to the economy of the entire nation. That value is many times the value taken into the FWS. In the thousands of dollars. It must be considered on the tax basis, trucking to the auction market, feed lot, meat packing plant, food market and on to the consumers tables. That one AUM is worth a hell of a lot to the economy of our nation.

We have studied EIS statements after EIS statements and this is the most untruthful misrepresented document we have viewed. It lacks both truth and wisdom. Our recommendation is to toss the document in the waste basket. Make a new one with no appropriation from Congress.

Respectfully submitted
Glen C. Childers, Pres.

CC: Secretary of Interior, Cecil Andrus
Senator John Melchor
Senator Max Baucus
Congressman Ron Harleman
Congressman Pat Williams

Response to Garfield McCone Legislative Association

1. The subsidy results not from a flow of federal funds (\$106,830 out and \$15,133 back), but from a resource subsidy to ranchers who receive a AUMs worth substantially more than \$1.89 to them for \$1.89. It is this difference that generates the subsidy.

Your concern over the \$1.89 AUM is correct in that the \$1.89 fee does not reflect the value of the AUM to the ranch operation. This has been corrected by adopting a linear programming (LP) approach to estimating the financial impacts to the rancher.

The LP analysis estimates the change in gross income associated with a change in CMR AUMs. The LP measures changes in rancher cash expenditures, labor inputs, returns to investment, and beef cow inventories. The analysis does this using an average ranch budget for ranches of different ranch size classes. These budgets take into account numerous factors including seasons of use and differences in dependencies. This approach tailors the analysis to the regions and ranches by reviewing the ranch budgets with a representative rancher panel for the EIS area. In this case, the value per AUM was \$12.87.

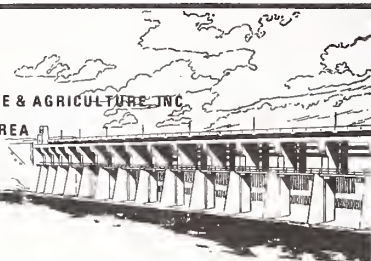
This technique is being applied to analyze similar grazing actions for BLM. The National Cattlemen's Association and Public Lands Council support this approach to impact assessment. See Appendix 10 for example inputs and outputs.

Glasgow

CHAMBER OF COMMERCE & AGRICULTURE, INC.

BOX 832 GLASGOW, MONTANA 59230

TELEPHONE (406) 228-2222



Statement of position as voted upon by the Board of Directors of Glasgow Chamber of Commerce and Agriculture at the regular meeting Oct. 14, 1980.

After study and discussion on the proposed alternatives as presented in the Draft Environmental Impact Statement, regarding the management of the Charles M. Russell National Wildlife Refuge, we the Directors of the Glasgow Chamber of Commerce and Agriculture find Alternative A of No Action to be appropriate for our support. However, a specific reference is made to the statement that livestock numbers would not change, yet under the Mitigating Measures paragraph, reference is made to portions or all of the Proposed action, Intensive Wildlife Management or No Grazing alternatives. We find this statement of Mitigating Measures entirely unsuited to the concept of the No Action alternative. We propose if Mitigating Measures are required, absolutely no plan to include the statement of no grazing for livestock be considered, or any reduction of present livestock carrying capacities be implemented.

Attest:

Robert Fyeldheim
Robert Fyeldheim
President
Glasgow Chamber of Commerce & Agriculture



ACCREDITED
CHAMBER OF COMMERCE
INTERNATIONAL



2100 L Street, N.W.
Washington, D.C. 20037
(202) 452-1100

October 31, 1980

Erwin W. Steuke
Area Manager
U.S. Fish and Wildlife Service
Room 3035 Federal Building
316 N. 26th Avenue
Billings, Montana 59101

Dear Mr. Steuke,

We are writing to express the views of the Humane Society of the United States concerning the proposed management plan for the Charles M. Russell National Wildlife Refuge.

We feel that none of the alternatives adequately considers or provides for all native wildlife. Alternative B (Proposed Action) comes closest to addressing this issue but, specifically, it is at odds with three of the CHR goals expressed on page 4 of the Draft EIS:

- 1) To attain and perpetuate a balanced, natural diversity of plant and animal communities,
- 6) To preserve and protect the integrity of the nationally significant Missouri River breaks ecosystem,
- 10) To demonstrate and contrast management of wildlife through natural ecological processes.

Furthermore, the Proposed Action grossly favors management of the habitat to benefit and augment populations of game animals. Mule deer and sharp-tailed grouse are already extremely common, yet the bulk of the proposal is directed at habitat management to favor these species.

October 14-18 □ 1981 Annual Conference □ St. Louis, Missouri

Page 2

We therefore propose the following modifications of Alternative B:

1. Grazing not be allowed in riparian habitats.

The extent of riparian habitats was seriously reduced by the creation of the Fort Peck Reservoir and now comprises less than 1% of the Refuge. These limited areas provide, in the words of the EIS, "most productive and important wildlife habitat," yet they will continue to sustain a "disproportionate share" of grazing. Riparian areas provide the nesting, roosting, foraging and water requirements for many species of animals and should be protected as fully as possible because of their ecological value as well as their rarity as a habitat type on the Refuge.

Goal 8 (page 4) specifically states that grazing for domestic livestock be provided "when compatible with wildlife and habitat goals" (our emphasis). Grazing would continue to threaten the natural state of riparian habitats and the animal community which is unique to them.

2. Prescribed burning not be allowed in the ponderosa pine/juniper habitats of the Refuge.

The theory behind such burning is to reduce erosion and fire hazard by maintaining a sub climax community. The reality is evidently to provide cover and food for game species; the size of the burns is considered optimal for deer and elk (page 11 of EIS).

These coniferous communities would attain climax condition if such burning were not allowed (page 62). Climax coniferous forests would support a different animal community than would a habitat where prescribed burning maintained a more open canopy and dense shrub layer. Songbirds such as juncos, red crossbills, pine siskins, mountain chickadees, western wood peewees, western tanagers, and Townsend's solitaires, which prefer denser coniferous habitats would be encouraged. The Proposed Action alternative favors the maintenance of seral communities, at the expense of climax communities, because these tend to be more productive of food and cover for game species.

Page 3

Goal 5 (page 4) is to "manage migratory bird habitats." If "migratory birds" is to be taken literally, then the coniferous forests must be managed to benefit the many migratory songbird species which depend on that habitat. If, on the other hand, "migratory birds" is used in its limited, game management sense (i.e. waterfowl), then no provision is made in the EIS for the majority of the 245 avian species found on CHR (only 15 percent are resident species).

Obviously, in this area of Montana there is a limited variety of habitat types. In general we believe that for the sage and grassland habitats, Alternative B would encourage a diversity of both game and non-game species which utilize these open habitats, even though the basis of the proposal is to create conditions favorable to ungulates and game birds. However, game species should not be given priority in every habitat type; in certain habitats, the requirements of game animals are different from those of non-game animals. The emphasis on development of shrubs in all habitat types serves to create an artificial uniformity. We believe that with the incorporation of our modifications (1. No grazing in riparian habitats, 2. No prescribed burning in the ponderosa pine/juniper habitats), Alternative B would then be consistent with the purported goal (#1) of the Refuge to "Attain and perpetuate a balanced, natural diversity of plant and animal communities."

More than ever before the American public is showing a strong interest in the non-consumptive benefits of wildlife. With the recent passage of the Non-game bill, official conservation agencies are finally initiating programs centered on non-game wildlife. We hope these changing attitudes toward managing for entire communities and habitats, instead of giving priority to a few commercially valuable species, will play a larger part in the management of the CHR Refuge.

Sincerely,

Natasha Atkins
Natasha Atkins
Wildlife Biologist

Patricia Forkan
Patricia Forkan
Vice President
Program and Communications

Response to the Humane Society of the United States

1. During the habitat evaluation procedure survey (Appendix 2) of the refuge, it became apparent that many species had similar habitat requirements. Rather than selecting an animal with little literature data available and not easily recognized by the public, mule deer and sharp-tailed grouse were selected among others. The habitat components of these animals fit the habitat component necessary for a large number of non-game wildlife.
2. Under the Proposed Action, riparian habitat on level land close to water will receive light to moderate livestock grazing pressure. Elsewhere on the refuge, this important wildlife habitat component will receive little or no livestock grazing.
3. Prescribed burn programs are not intended to alter significant portions of the coniferous communities to seral stages, but to provide a habitat diversity originally occurring before wildfire control. Prescribed burns will aid in the establishment of the deciduous shrubs and will provide a diversity of habitats for all wildlife species, both game and non-game alike.
4. CMR will be managed for habitat diversity which will provide for avian diversity.

LAST CHANCE AUDUBON SOCIETY

Helena, Montana 59601
November 7, 1980



Mr. Erwin W. Steucke, Area Manager
Fish and Wildlife Service
Federal Building, Room 3035
316 N. 26th St.,
Billings, Montana 59101

Dear Mr. Steucke:

We appreciated your speaking to the Montana Audubon Council in Billings in September. You outlined the alternatives clearly and I felt your environmental impact statement was well done, clear, and concise.

We wish to go on record as approving alternative B, the proposed action. It is clear from your statements and from what I know of that area that more wildlife cannot be managed. We hope the grazing in over grazed areas can be managed so that the land can again be productive. I went to a hearing in Helena last January at which some ranchers admitted the over-grazing. We recommend alternative B.

Sincerely,

Martha A. Haaseell
Martha A. Haaseell, President
Last Chance Audubon Society

315 Hansen

The Lewistown Bowhunters Association, consisting of eighty five members, would like to provide the following input to your draft E.I.S. We hope you will consider our questions and, if needed, further analyze the impacts that we feel have not been sufficiently addressed. They are as follows:

(1) Road Closures.

We feel that future road closures would add to the growing concern of concentrated hunting pressure on the C.M.R. Therefore, we recommend that all present and existing roads be open for use. This would relieve some hunting pressure and aid in a better harvest for archers.

(2) Game Retrieval.

We would like to see some changes in the game retrieval regulations on the C.M.R. Refuge. We recommend that a C.M.R. selected individual or individuals be made accessible at Slippery Ann Station in order to facilitate downed game removal by accompanying or giving written permission to drive as near as possible to the downed elk or deer. This will decrease the chance of wasted meat. There are variables that are difficult access when considering the probability of successful animal removal. That is, for example, it is difficult to determine early in the morning whether the temperature at tan will be 60 or 110 degrees.

(3) Elimination of the alfalfa bottoms.

We feel that the cultivation of the fertile bottoms for forage crops should continue. The use of these alfalfa and grain fields by wildlife is obvious to anyone who views them. The impact to the farmers involved is obvious, though not discussed in the E.I.S. But the impact on the wildlife involved is hard to quantitatively assess and could be highly detrimental to their survival. We admit that their presence does not enhance the rugged beauty of the Breaks, but neither does the signs, buildings and other man made infringements upon this land that will remain. This vital forage should remain as long as a sizable portion is left for the use of the wildlife of until such time as it is positively shown that it's use is of no use to the wildlife or the C.M.R.

(4) Endangered or unique species.

We are against the introduction of endangered or unique species on the Charles M. Russell National Refuge as discussed in the proposed action. This introduction could have a very serious impact on our recreational use of the C.M.R. The impact of new species introduction needs to be carefully assessed and mitigated to prevent conflicts with legitimate refuge associated activities. By introduction



LEWISTOWN
BOWHUNTERS
ASSOCIATION
LEWISTOWN MONTANA 59044

of these species to C.M.R. the restrictions on hunting could be controlled by many nature groups who strive to protect endangered species. Once an endangered species is introduced to an area trapping is halted, and control could begin on hunting. If protectionist groups decide that hunters could become a detriment to these species, they could insist on closures to hunting in this particular area. As the endangered species begins to thrive and expand its territory, so could these controls. With this, we feel that our hunting rights are being infringed upon and thus harvest objectives are not met.

We feel the impacts from the introduction of threatened or endangered species is not sufficiently addressed and must consider future hunting and trapping closures.

(5) Elk management.

As stated in the Draft Environmental Impact Statement pg. 44 "Adjacent landowners and grazing permittees attitudes are negative towards this expansion (of elk herd) and poaching and illegal shooting could limit further expansion of their (elk) range." Also stated is: "The present elk population level in the breaks ecosystem (on and off refuge) is at a level (approximately 1300-1500) that can be tolerated by the ranching community."

It has been shown that bowhunting is an effective management tool in the C.M.R. range. Ref: 1979, 1980 archery seasons.

We suggest that the population of the elk herd remain in the area of 1300-1500 animals in the C.M.R. ecosystem. This will keep an excellent working relationship with the ranchers in the area of the C.M.R. ecosystem which is vitally needed to produce harmony with the people in Central Montana. If the elk herd were to expand beyond the tolerated 1300-1500 animals, we suggest that special hunts be held for bowhunters. Example: late season hunts, longer seasons and special area hunts. Bowhunting, as stated earlier, is an effective management tool. It could be used realistically for a balance of herd, and most importantly, as a tool for a working relationship with the ranchers in the C.M.R. ecosystem.

(6) Water developments.

We feel that water developments could be used as a grazing management



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LEWISTOWN MONTANA 59044

tool. It seems an added emphasis on the construction of reservoirs, pits or water savers, in suitable areas, would decrease the intense pressure of concentrated animals.

Several years ago the FWS considered such developments at a number of sites, using Soil Conservation Service criteria as guidelines. A number of sites were approved, while many were dropped from consideration. While good water development sites are not easily found in the C.M.R. There are sites suitable for water developments even though they do not meet SCS criteria. As funds become available, additional water developments would be an excellent management tool, and in no way would deter from wildlife management priorities.

(7) Accuracy of the Draft Environmental Impact Statement.

We feel that the use as stated may in fact be hunters or fisherman in pre-season scouting. Statements written out on page 209 are hard to believe. We feel these figures should be substantiated and the bowhunter hours depicted. We feel from April to October sportsfisherman are the main users because of the success in the area. The months of July to September are used by hunters locating and scouting potential areas for hunting. The months of November through March are used by coyote hunters and trappers. Figures show that over 600 permits were issued for coyote hunting. 365 permits were issued to gun elk hunters, and 1400 archery elk permits were issued by C.M.R. In summary, we feel that many of these sports etc. are actually hunters and this should be further substantiated and assess the impacts.

(8) Summary

In summary, the L.B.A. feels that the impacts to bowhunting have not been sufficiently addressed. We do, however, feel that Alternative D, Multiple Use, is the most logical and fully support it as the alternative to be selected.



LEWISTOWN
BOWHUNTERS
ASSOCIATION
LEWISTOWN, MONTANA 59001

Response to Lewistown Bowhunters Association

1. Several hundred miles of designated roads exist on the refuge. Those suitable for continued use will remain open, while those susceptible to landslides, washouts, or wildlife conflicts may be abandoned or changed. Essentially, the road pattern as shown on the CMR road map will remain the same.
2. Regulations allow the retrieval of game by boat or horse. Vehicular travel is restricted to designated roads, primarily due to the fragile environment of CMR.
3. The decision to manage in a "generally natural setting" is in accordance with FWS legislative mandates and policies. This philosophy of management precludes undue disturbance in the river bottoms. The FWS acknowledges that this decision will affect the abundance of some common wildlife species that require agriculture, but the riparian habitat which will replace the cropland is much more valuable to a greater number of wildlife (including deer and elk).
4. The Endangered Species Act does not preclude hunting, fishing, or any other form of recreation when these activities do not jeopardize the continued existence of these species or result in the destruction or adverse modification of their critical habitat.
5. The FWS does not propose a dramatic increase in deer and elk populations. The improvement and maintenance of habitat capable of supporting an overwintering population of 2.5 elk/sq.mi. in suitable habitat is the objective.
6. The decision to manage in a "generally natural setting" is in accordance with the FWS legislative mandates and policies. This decision precluded further water development except where specifically mentioned in the text. Further, in examination of RFP values compiled on allotments on the refuge, it has been concluded that additional water development would be detrimental to most wildlife species in that it would distribute livestock into areas now used almost exclusively by wildlife and that are needed by wildlife.
7. Based on available information (FWS visitor use and preference survey conducted in 1978), it is presently not possible to determine what percent of sightseer use (viewing scenery and exhibits) may be attributable to hunters and fishermen. Additional studies may be needed to measure such use.
8. The CMR now provides some of the highest hunter success bowhunting for elk in the nation and good hunting for deer. Results of the Proposed Action would, over a period of time, tend to improve this success.

MILES CITY
AREA Chamber of Commerce

P.O. Box 730 • Miles City, Montana 59301 • Dial 232-2890, Code 406

September 30, 1980



Erwin W. Steucke
Fish & Wildlife Service
Federal Building Room 3085
Billings, Montana 59101

Re: Charles M. Russell National Wildlife Range

Dear Mr. Steucke:

On behalf of the Miles City Area Chamber of Commerce Board of Directors, I would like to take this opportunity to express our sincere objection to any move to cut livestock range areas.

The Rancher/Farmer play a vital part in Montana's future, growth, and economics. With this in mind, we wish that no action be taken in regards to the Environmental Impact Statement. These lands are very important to the Ranchers and Montana's growth.

Eastern Montana needs your support for our growth. Please go with Alternative "A" - the no action plan, or the multiple use plan. But no cuts in livestock grazing by lengths of season or by numbers.

Sincerely,

Glenn Hartman
Glenn Hartman, Executive Director
MILES CITY AREA CHAMBER OF COMMERCE

CC: Senator John Melcher
Representative Ron Marlenee
Governor Tom Judge

GH/as



Montana Association Of Conservation Districts

7 Edwards
Helena, Montana 59601
Ph. 406-443-5711

November 21, 1980

Area Manager
U.S. Fish & Wildlife Service
Room 3035, Federal Building
316 North 26th Avenue
Billings, Montana 59101

Re: Comments on the CMR Wildlife Refuge DEIS

The Montana Association of Conservation Districts would like to go on record in support of Alternative A (No action). Alternative A has provided a workable plan, that includes several federal and state agency land holdings along with private land holdings and allotments in the area. There have been problems that come about with the present system, however most of these problems have been solved with proper communication between agencies and the private individuals. It is also felt that Alternative D (Multiple Use) is covered by Alternative A.

Alternative B (Proposed Action) is totally unacceptable by the Conservation Districts. This alternative will reduce grazing by 33 percent occurring by 1985 with additional reductions proposed if wildlife objectives are not reached. The present planned reductions could result in at least six operators being forced out of business along with a loss in income of 134,000 to the federal government. A statement on page 79 states that the loss of livestock related income is insignificant on a regional basis. Whenever the U.S. Fish & Wildlife Service can remove a minimum of six livestock operators from business I would consider this anything but insignificant. Welfare recipients, who pay no taxes, are treated like kings by the government however individuals whose ancestors and themselves have worked the land and managed to survive everything including the paying of taxes to support the government are classified as insignificant.

Alternatives C & E are totally ridiculous and should not even be considered.



Area Manager (U.S. Fish & Wildlife Service) November 21, 1980
Page 2

Alternative D is being covered under the present system to a successful degree.

Thanks for the opportunity to comment on the Draft EIS on Management of the CMR National Wildlife Refuge.

Sincerely,


Ray Beck
Executive Vice President

RB:dv

MONTANA ASSOCIATION OF STATE GRAZING DISTRICTS
7 Edwards, Helena, Montana 59601
443-5711

November 21, 1980

Area Manager
U.S. Fish & Wildlife Service
Room 3035, Federal Building
316 North 26th Avenue
Billings, Montana 59101

Re: Comments on the CMR Wildlife Refuge DEIS

The Montana Association of State Grazing Districts would like to submit the enclosed resolution, which was passed at the Grazing Districts Convention on October 15, 1980, as testimony of the over-all feelings and concerns of Montana's 30 State Grazing Districts.

As the Draft Environmental Impact Statement now stands and if a rewrite is not considered the Montana Association of State Grazing Districts are in favor of Alternative A. Alternative A has provided a workable plan, that includes several federal and state agency land holdings along with private land holdings and allotments in the area. There have been problems that come about with the present system, however most of these problems have been solved with proper communications between agencies and the private individuals. It is also felt that Alternative D (Multiple Use) is covered by Alternative A.

Alternative B (Proposed Action) is totally unacceptable by the Grazing Districts. This alternative will reduce grazing by 33 percent occurring by 1985 with additional reductions proposed if wildlife objectives are not reached. The present planned reductions could result in at least six operators being forced out of business along with a loss in income of 134,000 to the federal government. A statement on page 79 states that the loss of livestock related income is insignificant on a regional basis. Whenever the U.S. Fish & Wildlife Service can remove a minimum of six livestock operators from business I would consider this anything but insignificant. Welfare recipients, who pay no taxes, are treated like kings by the government however individuals whose ancestors and themselves have worked the land and managed to survive everything including the paying of taxes to support the government are classified as insignificant.

Alternatives C & E are totally ridiculous and should not even be considered.

Area Manager, US Fish & Wildlife Service November 21, 1980
Page 2

Alternative D is being covered under the present system to a successful degree.

Thanks for the opportunity to comment on the Draft EIS on Management of the CMR National Wildlife Refuge.

Sincerely,


Ray Beck
Executive Secretary

RB:dv

cc: Senator Max Baucus
Senator John Melcher
Representative Ron Marlenee
Representative Pat Williams

MONTANA ASSOCIATION OF STATE GRAZING DISTRICTS

RESOLUTION NO. 4

Adopted: 10/15/80

C. M. Russell - Environmental Impact Statement

WHEREAS, the Environmental Impact Statement on the C. M. Russell Game Range is totally inaccurate of the sentiment of livestock industry; and

WHEREAS they have not recognized obvious problems, such as unfenceable areas, over population of prairie dogs, and also the need of livestock industry for relative stability.

THEREFORE BE IT RESOLVED that the Montana Association of State Grazing Districts recommend a complete rewrite of the draft Environmental Impact Statement on the Charles M. Russell Game Range.

Response to the Montana Association of Conservation Districts and the Montana Association of State Grazing Districts *

* The comment letters from these two organizations are almost identical; therefore, they will be responded to as one.

1. The regional economic effects are insignificant because the relative change on the six county area is a very small percentage change. Thus to the region, there would be no perceptible change in key economic variables such as employment or income as a result of these alternatives. The absolute effect to a few individuals, as measured without reference to the size of the six county area, may be large. While this change is important to these individuals, it does not seriously affect the human environment of the study area because the absolute changes have a small relative effect.

HEARING STATEMENT

BY: THE MONTANA CHAPTER OF THE WILDLIFE SOCIETY
TO: U.S. DEPARTMENT OF INTERIOR, FISH AND WILDLIFE SERVICE
SUBJECT: CMR - DRAFT ENVIRONMENTAL IMPACT STATEMENT

The Montana Chapter of the Wildlife Society is a state subdivision of a national organization of practicing wildlife professionals with approximately 150 members throughout the state. Most members are employed by conservation agencies. Since this proposal addresses some wildlife problems in one area of the state, we appreciate this opportunity to provide constructive criticism of the draft EIS.

We consider the CMR to be extremely valuable. It is the largest piece of real estate in Montana with wildlife as its primary objective. In terms of numbers and variety of wild vertebrates it is likely the richest contiguous one million acres in our state. The refuge is unique because it is adjacent to about two million acres of public land managed by the Bureau of Land Management, an agency with a mandate to consider wildlife production as one of its multiple use objectives. The CMR is also unusual because of the low human population in the area and except for Ft. Peck Dam and its reservoir, the area is relatively undeveloped. It is possible to circumscribe an area around the CMR the size of New Jersey with a human population of less than one per square mile with a variety of mostly native plant communities. In all, the CMR survives as one of the largest shortgrass ecosystems in the U.S.

At this time the CMR is not an island of wildlife habitat. It is closely tied to the surrounding country and its wildlife condition is to a large extent dependent on this tie. Political pressures and administrative temptations to "stake out" the "CMR Wildlife Ranch" should be moderated by considerations of the CMR being part of a much larger wildlife environment. In time, human population and economic development pressures will probably isolate the CMR, but that time is at least several decades away and hopefully present refuge land and wildlife managers will be mature, professional, and sophisticated enough to take advantage of the current situation.

According to all available information, the combination, number, and variety, of vertebrates using the CMR is greater now than any time this century. This situation, it should be remembered, is not a result of any one wildlife management effort but more of a function of soil, water, climate, human population and economic conditions and an unusual number and variety of wildlife living areas which are in part the unconscious result of a lot of different, independent, small management efforts. There is a danger that a unified and homogenized management program will, again, unconsciously function to limit this number and variety of living areas thus restricting the wildlife resource. Guarding

Hearing Statement
Page 2

the richness of the existing wildlife resource and protecting the naturalness of the area should be the first priorities.

There is a great need, more than ever before, for federal land managers to consult with local and state economic, agricultural, and wildlife interests. Management programs must be made somewhat consistent with local needs and desires.

We are not opposed to grazing on the CMR. As a matter of fact, we support livestock grazing as an consistent economic use of the vegetation resource. We are opposed to those actions, including livestock grazing, which damage the natural ecosystem, reduce the wildlife potential, or damage other public values. We believe that livestock grazing capacity should be determined by the grazing available on upland plateaus and benches. Coulees, sideslopes, and other steep terrain constitute the main deer and elk habitat and soils and vegetation in these areas are easily damaged by overgrazing.

In part II., Alternatives, we support most of the CMR goals (p.4). We are, however, skeptical about some things that may be included in Goals 4, 5, and 10. The term "goals" used in Goals 3, 8, and 9 should be called objectives.

We support the wildlife objectives (p. 5). However, since sage grouse and antelope use much the same habitat, sage grouse should be included in No. 5. The list should be extended to include a No. 12 for species of special interest which could include: blue-bird, upland plover, mountain plover, poorwill, osprey, and possibly others.

In the range objectives, No. 1 states "Improve climax range conditions." The government has great power, but this can't be done! You may be able to improve present range condition toward climax.

ALTERNATIVE B (PROPOSED ACTION)

The Montana Chapter supports the goal of improving vegetation to enhance wildlife habitat. However, since this proposal depends heavily upon permittee's compliance with the terms of their grazing permits (livestock numbers, grazing season, and pasture management patterns), failure in this area negates the entire plan. Although CMR presently attempts to deal more strongly with non-compliance, the livestock management plans are a paper exercise. Without permittee compliance, this plan reverts to Alternative A (No Action).

ALTERNATIVE A (NO ACTION)

This proposal may be second best for wildlife, mainly because we know what is there now. If the many problems of compliance were

Hearing Statement
Page 3

corrected under this alternative, there would be some vegetation improvement and wildlife benefit. The most serious consequence of this proposal is the continued deterioration of already damaged sites, mainly resulting from livestock management. We would prefer a fire control policy that would put better guidelines on which fires to fight and which to let burn themselves out.

ALTERNATIVE C (INTENSIVE WILDLIFE MANAGEMENT)

We are opposed to the fencing of the entire refuge boundary in this alternative. The grazing reductions appear to be greater than necessary to provide wildlife habitat. The intensive farming plan also violates the natural ecosystem guideline. We would be opposed to 38,000 acres of soil ripping on the same basis.

ALTERNATIVE D (MULTIPLE USE)

Supposedly the multiple use option and the no action option are not very different. The most damaging part of this proposal is the control exerted by livestock permittees over the use of forage. Most of the current problems are the result of one-sided policy favoring livestock use. Again, unless there is better control of permittee compliance, things out there on the ground would no change that much.

ALTERNATIVE E (NO GRAZING)

Without some prior study to indicate the need, we are opposed to a plan of prescribed burning. Soil ripping in this proposal is not necessary. We reiterate our support of grazing as a beneficial use of the vegetation resource.

OTHER COMMENTS

1. We have serious reservations about the ability of the FWS to enforce permittee compliance with the conditions of their grazing permits.

2. We have reservations about the results of the range survey that is the basis of the vegetation planning. The vegetation results have to be biased due to the above normal precipitation preceding the survey. Specified procedures were not followed in estimating vegetation production. The standards used in the survey may not be applicable to the area surveyed. Very little clipping was done to verify estimates. The relationship between Appendix table 8-A and 8-B give virtually no indication of how the survey supports either the theoretical (8-A) or the actual (8-B) production and should be dropped from the final report. The range condition classes appear to be too high, primarily due to the extra weight given to robust perennials which provide

the aspect of more vegetation that was actually there.

4. We have reservations about the system of planning. This seems to be a cart-before-the-horse situation. The logical method would be to determine problems, provide a plan to correct the problem or a study to provide needed data to plan the correction. There is a general lack of planning to study problems to determine workable and successful solutions. Many of the problems are controversial, mainly due to the lack of information which can be accepted by both sides, and the only permanent solution will have to be based on better information.

5. We support rest-rotation grazing as a method of restoring vegetation where it is damaged and in those places where it is demonstrated to be superior to a deferred rotation system for maintaining wildlife habitat. Stubble height requirements appear to be too high. Much of the vegetation never attains the stubble minimum. Water developments should be fenced and 3 or 4 water tanks placed on ridges away from the reservoir, these tanks to be rotated yearly or seasonally to reduce the trampling and trailing damage to the vegetation near water sources.

6. We support a plan which provides professional study of specific wildlife benefit programs, before they are implemented and after they are completed.

7. We would support a plan which would restore the productivity of the larger coulee bottoms, reduce gully erosion, and provide wildlife habitat.

8. Endangered species introductions should be coordinated with existing wildlife programs, handled quietly with a minimum of management adjustments. Focusing attention on this aspect of refuge management at this time does not seem to be in the interest of the endangered species.

9. Elk and deer stocking rates should depend on conditions surrounding the CMR as well as habitat conditions within the refuge boundary. In this area coordination with state and local private interests is most important.

*Robert H. Hensler, President
Montana Chapter TWS*

Mr Robert Hensler, Pres
Montana Chapter TWS
405 3rd Ave E.
Kalispell, Mt 59901

10. Professional studies on specific wildlife programs have been done in the past, and will be done in the future, as funds and manpower permit.

11. The FWS will work to achieve its objectives while concurrently coordinating with other agencies and individuals impacted by actions on CMR.

Response to the Montana Chapter of the Wildlife Society

1. A goal that is normally expressed as a broad, general statement is usually not quantifiable, and is timeless in that it usually has no specific date by which it is to be completed.

An objective is measurable and implies precise time-phased steps to be taken and resources to be used which, together, represent the basis for defining and controlling the work to be done.

2. The Executive Order mandates a specific objective for antelope and sharp-tailed grouse, and FWS feels it must manage specifically for these species. Additionally, by managing for habitat diversity, we believe we are providing for a wide diversity of wildlife species.

3. The FWS agrees; the text has been amended.

4. Upon further analysis, FWS determined that only about 300 miles of the 440 mile boundary would need to be fenced under the Intensive Wildlife Management alternative. See amended text.

5. It is the intent of the FWS to enforce all rules and regulations including conditions on grazing permits.

6. The range survey was done by four highly competent range specialists. We admit the survey was done during an above normal precipitation period (see paragraphs 1 and 2, page 172). However, SCS procedures for range surveys are designed to take this into account. The 100-plus years of experience of the persons conducting the survey guided them in their decisions.

FWS believes Appendix Tables 8a and 8b do provide data that is of value. They provide the reader with a guide as to what can be expected on the refuge under varying conditions.

7. Please see Appendix 1b (not available in the DEIS) for a review of the planning process used for CMR.

8. The residual cover heights were taken, in part, from original sharp-tailed grouse research done in Nebraska by Sisson. Mr. Sisson is acknowledged as an authority on the habitat of sharp-tailed grouse. These stubble height criteria will be applied only to range sites capable of producing the required stubble heights.

9. This practice is good in theory. However, it is very expensive, presents numerous mechanical problems, and detracts from the naturalness of the area.



Montana Natural Resource Clinic

School of Law
University of Montana
Missoula, Montana 59812
(406) 243-6500, 243-4312

Carl W. Tobias, Director

September 22, 1980

Don W. Minnich
Regional Director
Fish & Wildlife Service
USDI
P.O. Box 25486
Denver Federal Center
Denver, Colorado 80225

Dear Mr. Minnich:

I appreciate your taking the time to talk with me on Friday about the timing of the public hearings on the C.M. Russell management plan and your willingness to speak with the Area Manager about the problem. Regardless of the resolution of this problem, we do look forward to working with the Service on developing the best plan possible.

Thank you for your help.

Sincerely,

Carl W. Tobias
Carl W. Tobias
Associate Professor

CWT/rp

MONTANA STOCKGROWERS ASSOCIATION, INC.

P. O. BOX 1679 — 420 NO. CALIFORNIA ST. — PHONE (406) 442-3420 — HELENA, MONTANA 59601

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HATH
HATH
HATH

December 9, 1980

Erwin W. Steucke, Area Manager
Fish and Wildlife Service
Federal Building, Room 3085
316 No. 26th St.
Billings, MT 59101

Dear Wally:

Please place the Montana Stockgrowers Association on record in support of the comments submitted November 13, 1980 by C.E. Hitch of the Montana Public Lands Council on the draft environmental impact statement for the Charles M. Russell National Wildlife Refuge. His assessment of this document is detailed and is in complete accord with my views on the draft EIS.

I realize this comment is a bit late, however, I have been out of the office until just this week and was unable to get to it earlier.

Thank you for allowing us to comment in this fashion.

Sincerely yours,

Mons. L. Telgen
Mons. L. Telgen,
Executive Vice President

MLT:mt

SERVING MONTANA'S CATTLE INDUSTRY SINCE 1884

MONTANA TRAPPERS ASSOCIATION

BOX 29

SEELEY LAKE, MT. 59868

Working today for a tomorrow in trapping.
Furbearers are a RENEWABLE NATURAL RESOURCE.

November 15, 1980



Ralph Fries, Refuge Manager
Charles M. Russell National Wildlife Refuge
Airport Road
Lewistown, MT. 59457

Dear Ralph:

The Montana Trappers Association has reviewed the Environmental Impact Statement for the management of the Charles M. Russell National Wildlife Refuge. Relevant to that our Board of Directors have passed unanimously the following resolution which we would like to have implemented in the management plan.

Whereas the U.S. Fish and Wildlife Service has statutory authority for the management of all species of wildlife on the Charles M. Russell Wildlife Refuge, and

Whereas the U.S. Fish and Wildlife Service has in the past largely ignored most furbearers and their management on the Charles M. Russell Wildlife Refuge, and

Whereas the U.S. Fish and Wildlife Service is presently considering a master management plan for the Charles M. Russell Wildlife Refuge, be it

Resolved that the Montana Trappers Association urges the U.S. Fish and Wildlife Service to open the Charles M. Russell Wildlife Refuge to trapping of all furbearers and predatory animals on a species and site specific management program.

Your consideration will be appreciated.

Sincerely,

Edd Wentwig /CDS

Edd Wentwig, President

EN/CDS

Response to Montana Trappers Association

1. One of the primary objectives of FWS management is the protection of wildlife and its habitat. Future furbearer trapping will be considered in light of refuge objectives, FWS policies, and applicable federal laws.

3318 Sundance Drive
Bozeman, Montana 59715
December 2, 1980

Mr. Erwin W. Steuke, Area Manager
U.S. Fish and Wildlife Service
Room 3035, Federal Building
316 North 26th Avenue
Billings, Montana 59101

Dear Sir:

I am writing you with comments on the draft environmental impact statement for the Charles M. Russell National Wildlife Refuge. In general I would agree that your proposed alternative B offers the most benefits for wildlife in the long run. However, I believe that there are some inherent conflicts between your stated Congressional mandates and some of your proposals for action in alternative B. Specifically, the ripping, planting, and spraying that you propose over as much as 10,000 acres of the CMR refuge will not result in a generally natural setting for wildlife.

Nor will the inclusion of existing cabin sites result in a natural setting. I believe that the inclusion of recreational homesites on a national wildlife refuge is an incompatible and inappropriate use of the area and would recommend phasing these cabins out entirely.

I agree with your objectives of gradual reduction in livestock grazing, phasing out farming in the Missouri River bottomlands, and the consolidation of land ownership. However, I do not believe that all natural fires should be suppressed as they provide an important component in maintaining the refuge in a generally natural setting.

The same objection applies to the large scale predator control on the CMR refuge. Natural predators form an integral part of the wildlife population, and I do not believe that predators should be killed just to benefit the livestock grazing on a national wildlife refuge. Instead, predators should be controlled only in extreme cases, where endangered species need protection or in similar situations to enhance wildlife. I commend your plan to reintroduce the black-footed ferret, the peregrine falcon, the swift fox, and bighorn sheep.

Some of your plans for enhancing recreational opportunities in the refuge can only be viewed with alarm, especially the possible introduction of additional boat launching and float plane landing sites. Wherever funds are limited, the preservation and enhancement of wildlife values should take highest priority, especially in areas like the CMR refuge, where so much deterioration by overgrazing of both cattle and sheep has been allowed to occur. Your proposed alternative B at least is a beginning step in addressing these problems for the benefit of wildlife.

Sincerely yours,

Ann Sutton
Ann Sutton, Vice President
Montana Wilderness Association

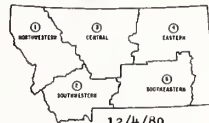
Response to Montana Wilderness Association

1. Please see responses to Defenders of Wildlife.



EDUCATION — CONSERVATION
Montana Wildlife Federation

AFFILIATE OF NATIONAL WILDLIFE FEDERATION



12/4/80

Erwin W. Stauke, Area Manager
Fish and Wildlife Service
Federal Building
Billings, Mt. 59101

Dear Mr. Stauke:

Attached are the written comments of the Montana Wildlife Federation on the C.M. Russell draft environmental impact statement. Our organization represents over 1800 sportsmen and women in Montana, who have a keen interest in preserving wildlife, habitat and our sporting heritage.

I would be very willing to discuss any of our comments or any other comments on the DEIS with you or your staff whenever you feel it would be both helpful and productive. Our organization stands ready to assist in the preservation and maintenance of Montana's wildlife resource whether on or off the C.M. Russell Wildlife Refuge.

If I can be of any further assistance please feel free to call.

Sincerely Yours,
Wilbur W. Robinson
Wilbur W. Robinson
Executive Director
Montana Wildlife Federation

Box 901
Helena, Mt. 59601



THE WEALTH OF THE NATION IS IN ITS NATURAL RESOURCES
CONSERVATION DOES NOT END WITH CONSERVATION



The Montana Wildlife Federation supports the Fish and Wildlife Service eleven goals as outlined in the DEIS, but we question the lack of specific details to achieve those goals. In fact, most of the goals, wildlife objectives, range objectives, and recreation objectives offer little supporting evidence or data. Further, many of the objectives appear as if they were chosen arbitrarily. We expect to see more evidence, either in a supplement, which has already been called for, or in an expanded final environmental impact statement.

The Federation compliments the Service for undertaking this monumental task of planning on the CNR, but we are dissatisfied with the EIS for the following reasons:

1. The EIS is grossly inadequate in its exploration of management alternatives.
2. There is an implied absolute confrontation between grazing by domestic livestock and wildlife which is unjustified. That confrontation seems to permeate the entire document.
3. The Federation objects to the use of mechanical range renovation, such as soil ripping, plowing, burning and furrowing as a management technique. We believe this conflicts with the Service's goal of "naturalness".
4. There is very little discussion of sport hunting and fishing as either a recreational resource or as a management tool. Further, what objectives must be met before hunting or fishing will occur?

5. The economic analysis is more of a 'guesstimate' than sound scientific analysis. Further data should be supplied and more sophisticated techniques should be used in order to more accurately predict both the costs and benefits. Are you in fact going to put six ranching operations out of business, no more, no less? Your evidence is very slim.
6. Is 'naturalness' really going to be adhered to or are other objectives such as the myriad introduced species and pen/pasture program going to give the CNR a "zoos-like" look?

The Federation strongly feels that wildlife and wildlife habitat must receive primary attention both in the EIS and on the ground. All of the alternative management plans appear to be very general and focus heavily on livestock-range management rather than meeting specific wildlife, habitat, or recreational goals.

To imply that any AUM taken away from livestock will automatically be used as food or cover by wildlife would be difficult if not impossible to demonstrate.

We support the reintroduction of endangered species such as black-footed ferrets, peregrine falcons, and swift fox, but we question the wisdom of translocating big-horn sheep since previous efforts have been largely unsuccessful.

The elimination of farming operations along the Missouri River is another positive step. Along with such measures specific methods of re-establishing riparian habitat should be more thoroughly discussed.

We also support management of predators, including hunting and trapping. There should be more discussion of this controversial issue in the EIS. Predator control may be absolutely necessary if they cause damage to domestic livestock off the Refuge, and on.

We propose that the Fish and Wildlife Service consider the following:

1. Rest-rotation grazing be implemented on any area on the CMR now grazed by livestock or on any area previously grazed by livestock that needs range improvement. All rest-rotation plans must be coordinated and implemented with adjacent public and private landowners.
2. Continuous grazing, even at moderately reduced rates, is not sound range management. Continuous grazing was the primary cause of range deterioration in the West, including Montana.
3. Riparian areas may have to be fenced to minimize livestock grazing but it is not necessary to eliminate rest-rotation grazing from the entire allotment. This issue addressed incorrectly in the DEIS and Hornay is quoted out of context.
4. The National Bison Range is used as an example of so-called "limited grazing" but is in fact an excellent example of rest-rotation grazing. The system has been very successful in providing habitat for many game and non-game species of wildlife.
5. Either in a supplement or an expanded final EIS

wildlife, range, and recreation objectives plus specific methods for attaining them need to be more clearly detailed and laid out.

6. A clearer discussion of the current and future status of hunting on the Refuge needs to be set forth. At what wildlife population density, sex, or maturation will hunting be allowed?

7. Either in a supplement or in an expanded final EIS more management alternatives should be explored and the preferred alternative should not pose the unnecessary confrontation between sound wildlife management and grazing by domestic livestock. If cuts in grazing, which may be necessary, are proposed, they should be proposed after other range management techniques such as rest-rotation grazing have proven to be failures.

In conclusion, the Montana Wildlife Federation supports the Fish and Wildlife Service in its efforts to protect, preserve and enhance wildlife values of the CMR, however we cannot support any of the proposed alternatives in the DEIS. We call on the Service to gather more precise data and to exhaustively re-write this EIS. The Service should either issue a supplement or plan on expanded final environmental impact statement.

Response to the Montana Wildlife Federation

1. Please see Appendix 1b for an expanded discussion of the planning process utilized for CMR.
2. If FWS accepted a premise that livestock grazing and wildlife were incompatible, there would be no grazing on CMR. FWS believes that grazing under certain conditions, as to time, area, and intensity, is compatible with wildlife.
3. The FWS believes that there is adequate discussion of both hunting and fishing in the DEIS. Hunting frameworks are established in coordination with Montana Department of Fish, Wildlife, and Parks, and in accordance with policies and legislation of the FWS.
4. The economic analysis has been reevaluated, and the text revised accordingly.
5. All releases will be to either reintroduce a species not now present on the area or bolster a lagging population; none of these will be penned.
6. We agree that wildlife should come first, and intend to manage CMR that way. Note that habitat management plans will be developed for each grazing allotment (or combination of similar allotments) to provide for the year-long requirements of wildlife.
7. There is no intention in the EIS to infer that an AUM taken from livestock will automatically be eaten by wildlife; the EIS deals with total wildlife habitat, not just forage produced.
8. This is beyond the level of detail for the CMR EIS.
9. Two previous EIS's have discussed this issue: the Operation of the National Wildlife Refuge System, and the Mammalian Predator Damage Management for Livestock Protection in the Western U.S.
10. The FWS will consider using any system that will meet wildlife objectives while minimizing permittee impacts.
11. Hornay stated "that grazing would have to be eliminated if important riparian areas were not fenced." If riparian areas were fenced, grazing could occur in the remainder of the allotment.
12. The system designed at the National Bison Range was developed to enhance vegetation for bison. Thus, bison are the primary beneficiaries. This is in accordance with the area's legislative mandates. Conversely, intensive systems presently in operation on CMR tend to primarily benefit livestock. This is not in accordance with the refuge enabling legislation. However, the FWS does not mean to imply that specialized grazing systems will not be utilized in appropriate situations.

13. The level of detail discussed herein is appropriate for this type of document, an EIS.
14. This level of detail is beyond the scope of an EIS. Hunting frameworks are established in coordination with the Montana Department of Fish, Wildlife, and Parks, and in accordance with policies and legislation of the FWS.
15. The FWS is currently studying rest-rotation; see also Response #10 above.

NATIONAL AUDUBON SOCIETY

P.O. BOX 3557 • BOULDER, COLORADO 80307 • (303) 440-0210



REGIONAL
REPRESENTATIVE

ARIZONA • COLORADO
IDAHO • MONTANA
UTAH • WYOMING

October 31, 1980

Mr. Erwin H. Steucke, Area Manager
Fish & Wildlife Service
Federal Building, Room 3035
316 North 26th Street
Billings, Montana 59101

Dear Mr. Steucke,

Re: C.M. Russell NWR DEIS

After close consultation with our Montana chapters and extensive personal study of the issues our regional office would like to go on record as strongly supporting alternative B (the proposed action). Many may wonder why we chose this over alternative C, (Intensive Wildlife Management) or E (No Grazing) in lieu of the bad track record of grazing abuses and essentially it is because we feel that USF & WS can and will manage the refuge under B in such a way that wildlife, livestock, and recreational interests can each benefit from the specifics of the plan.

We firmly believe that the prime objective of the Refuge is to promote, enhance, enrich, and in general care for its wildlife. Proposal B, as presently defined, does in our opinion offer these opportunities while still allowing for livestock and recreational use. Conflicts should be weighted in most cases favoring wildlife however the recommended proposal should minimize most of these.

Now for few specifics:

1. The prime goal of the management plan should be to bring the lands back to prime productive capacity. This is especially important in the sensitive riparian zones.
2. There must be better enforcement to stop overstocking, illegal livestock trespass, etc.
3. Predator management must be scientifically and carefully applied from a biological/ecological standpoint.
4. I would encourage a greater peregrine release than 2 or 3 birds. We suggest 8-10 birds annually from 3 different hack sites. There now are sufficient captively raised birds to be ambitious as to numbers. Also, a 65%-75% first year mortality of raptors mandates a larger numerical release.

AMERICANS COMMITTED TO CONSERVATION

5. A high priority should be placed on the establishment of a fenced, demonstration herd of bison similar to Custer State Park. This will greatly aid in increasing the public's appeal to the refuge and be an economic benefit to surrounding communities.
6. Important wildlife inholdings should be acquired just as quickly as they become available.
7. An 8-10 person, interdisciplinary advisory council, might be a worthy first step in launching the management plan. Obviously good and bad points can be made regarding advisory councils, but in general it could be the forum that keeps people talking instead of fighting.

In summary, our Society feels the DEIS team and refuge have done a good conscientious job in putting together a working and workable plan. For too long apathy, overuse, misuse have characterized the management options at the Refuge and these shortranged policies have not served any interest well. The opportunity to have a showcase refuge exists here and they should not be harmful to the local economy. We therefore reiterate our strong support to Alternative B.

Sincerely,

Robert K. Turner
Robert K. Turner
Regional Representative

Response to the National Audubon Society

1. Any peregrine releases will be in conformance with the peregrine recovery team recommendations and the recovery plan. The DEIS states (page 10) that two introductions would be made. This could include as many birds as team recommendations and bird availability allows. At present, only two hacking sites have been identified. Others will be evaluated as time permits.
2. In the planning process, a detailed discussion was held concerning this subject. The decision was made not to have demonstration bison herds on OMR in the Proposed Action because of increased fencing costs, surplus animal disposal problems, and impacts on refuge activities. Bison herds in a natural setting are available for public viewing at Yellowstone Park, the National Bison Range in Montana, the Corps of Engineers' pasture in Fort Peck, Montana, Fort Niobrara National Wildlife Refuge in Nebraska, and in Custer State Park, South Dakota.
3. The FWS agrees that the idea of an interdisciplinary advisory council has both good and bad points, and the establishment of such a council will be considered when planning implementation of the EIS.



NATIONAL WILDLIFE FEDERATION

1412 Sixteenth Street, N.W., Washington, D.C. 20036 202-797-6800

December 5, 1980

Mr. Erwin Steucke, Area Manager
U.S. Fish and Wildlife Service
Room 3035, Federal Building
326 North 26th Avenue
Billings, Montana 59101

Dear Mr. Steucke:

Enclosed are the National Wildlife Federation's comments on the draft Environmental Impact Statement on the Management of the Charles M. Russell National Wildlife Refuge. We appreciate the opportunity to comment, and hope that our recommendations will be of value to the Refuge planning team. If you have any questions regarding our comments, please contact Thomas Lustig (202, 797-6885) or myself (202, 797-6807). Would you please keep us informed of any further actions taken on the CHR management plan. Thank you.

Sincerely,

Cathy J. Bernstein
Cathy J. Bernstein
Public Lands

Enclosure

cc Wilbur Rehmann, Executive Director
Montana Wildlife Federation
Richard Day, President
Montana Wildlife Federation

Comments of the National Wildlife Federation
on the Draft Environmental Impact Statement
on Management of the Charles M. Russell
National Wildlife Refuge, U.S. Department of
the Interior, Fish and Wildlife Service

The National Wildlife Federation welcomes this opportunity to comment on the Draft Environmental Impact Statement ("DES") on the Management of the Charles M. Russell National Wildlife Refuge in Montana.

The National Wildlife Federation ("NWF") with affiliates in all fifty states as well as Guam, Puerto Rico, and the Virgin Islands, and over 4 million members and supporters, is the largest nongovernmental conservation organization in the nation. NWF's Montana affiliate has approximately 1800 members, most of whom are hunters, fishermen, and/or wildlife observers. The Federation has a long history of active support for the improvement and preservation of wildlife habitat to optimize the size and diversity of wildlife populations.

Introduction

In recent years, the number of commercial and recreational users of the public lands has increased, placing a tremendous burden on the natural habitats to sustain their normal productivity, and threatening valuable natural resources. In the face of such resource conflicts, the Federation stresses the need to preserve representative areas of geological, biological, and ecological systems native to our country; and, to develop comprehensive habitat management programs which protect and enhance wildlife values.

The Charles M. Russell National Wildlife Refuge ("CMR") exemplifies this problem of resource conflicts on federal land.

-2-

Over the years, three different agencies have had partial or total control over CMR management. Between 1936 and 1975 the Refuge was under joint management of the Bureau of Land Management ("BLM") and the Fish and Wildlife Service ("FWS"). BLM took total control in 1975 through administrative action, but the following year Congress granted FWS exclusive jurisdiction over the Refuge. These administrative changes led to inconsistencies in the management of CMR and disregard for the initial purpose of this Refuge as set by President Roosevelt in 1936.^{1/}

At present, cattle graze freely over 50 percent of CMR Refuge while over 60 percent of the habitat is categorized as limiting to existing wildlife species. (DES, p. 39.) The Fish and Wildlife Service has proposed a management plan which would reduce grazing allotments and enhance wildlife resources, as well as "provide compatible human benefits associated with its wildlife and wildlands." (DES, p. 4.)

The National Wildlife Federation strongly supports the goals and objectives for CMR which are listed in the alternatives section of the DES (pp. 4-6) as well as the specific wildlife objectives of the proposed alternative (p. 80). These objectives satisfy NWF's policy for wildlife and rangeland management as well as complying with relevant federal laws (E.O. 7509,

^{1/} Congressman Leggett (former Chairman of the House Subcommittee on Fisheries, Wildlife Conservation, and the Environment), in congressional debates on H.R. 5512 (P.L. 94-223) stated: "... BLM has administered these lands in the past by encouraging multiple uses other than Fish and Wildlife. It has particularly emphasized commercial uses such as grazing. . . . In contrast, the U.S. Fish and Wildlife Service's primary responsibilities both by law and in fact is to provide protection for wildlife and for wildlife habitat. . . . Consequently, there have been constant conflicts between the two agencies concerning how to manage these ranges (CMR Refuge, Kofa Game Range, Charles Sheldon Antelope Range). . . ." (16 U.S.C. 668dd, Feb. 27, 1976, p. 36597).

-3-

Establishing the Fort Peck Game Range; P.L. 94-223, National Wildlife Refuge System Administration Act of 1966; P.L. 89-669, National Wildlife Refuge System - Designation--discussed in the following text). The Federation agrees with FWS that wildlife conservation is the primary purpose of the Refuge, with livestock grazing allowed only when and to the extent compatible with this purpose. The CMR management plan has the opportunity to set a needed precedent for future management of wildlife refuges subject to pressure from commercial uses.

CMR History

Many of the conflicts involving past CMR management stemmed from differing interpretations of the Refuge's purpose. In 1936, President Roosevelt withdrew a 1.1 million-acre tract of Montana land from further settlement and designated this area as the Fort Peck Game Range (later changed to Charles M. Russell National Wildlife Range) to be managed "for the conservation and development of natural wildlife resources and for the protection and improvement of public grazing lands and natural forage resources." (E.O. 7509, 1 Fed. Reg. 2149, Dec. 16, 1936).

In his withdrawal, President Roosevelt provided:

"that the natural forage resources therein shall be first utilized for the purpose of sustaining in a healthy condition a maximum of four hundred thousand (400,000) sharptail grouse, and one thousand five hundred (1,500) antelope, the primary species, and such nonpredatory secondary species in such numbers as may be necessary to maintain a balanced wildlife population. . . . Provided further, that all the forage resources within this range or preserve shall be available, except as herein otherwise provided with respect to wildlife, for domestic livestock. . . ." (Emphasis added.) (Executive Order 7509, Dec. 11, 1936, 1 Fed. Reg. 2149, Dec. 16, 1936.)

-4-

President Roosevelt's withdrawal made it clear that domestic livestock can graze on CMR only to the extent that they do not infringe upon the needs of wildlife, and that only forage not utilized by wildlife species should be available for livestock grazing. Roosevelt placed "the conservation and development of natural wildlife resources," as a primary reason for creating this Refuge and clearly expressed his concern that the Refuge be managed "to maintain a balanced wildlife population." (E.O. 7509).

In the years following Roosevelt's Executive Order, CMR management began favoring livestock uses over wildlife. In 1975, Interior Secretary Morton transferred total management authority for CMR to BLM which led to even more intense grazing activity. Grazing during this time became a primary activity on CMR, with over 50 percent of the AUM's designated for livestock grazing. As grazing increased, habitat for certain species of wildlife for which the Refuge was created deteriorated. (Congressional Record, Feb. 4, 1976, p. 2293; and Cong. Rec., Nov. 14, 1975, p. 36598.)

In an effort to reassert Roosevelt's initial goals for CMR, Congress transferred exclusive management authority for CMR to the Fish and Wildlife Service in 1976, under an amendment to the National Wildlife Refuge Administration Act. (P.L. 94-223, 16 U.S.C. 668dd, Feb. 27, 1976.) Congress, in granting exclusive CMR management authority to an agency designated by Congress (P.L. 93-271; 16 U.S.C. 742b) as "the guardian of our Nation's fish and wildlife resources at the federal level" (Congressional Record, Feb. 4, 1976, p. 9,2203), acknowledged CMR's primary purpose as wildlife protection.

Habitat Deterioration Due to Grazing

At present, over 60% of the Refuge is categorized as limiting to wildlife species. This condition exists in part because of livestock grazing, and in part because of the natural geologic and topographic conditions of CMR terrain.

Over 50% of CMR consists of soil and landforms which are fragile and highly susceptible to runoff and erosion. Several thousand acres of penspots (soils high in salt and low in water infiltration capacity) exist on the Refuge. These areas generally do not produce large crops of standing vegetation. The low humidity and strong winds characteristic of the area tend to draw water from the soil, which increases the problem of low water retention.

The gradual increase in grazing AUM's over the years has placed an increased burden on the capacity of CMR soils to produce a healthy vegetative stock. Productivity rates, as stated, tend to be low on much of CMR terrain. As the cattle graze, they selectively remove palatable climax plant species, and in the process change the plant composition of the entire community. At present, only 51-75% of the plant species are representative of the normal climax community. Cattle, in grazing and trampling vegetation on steep terrain and riparian areas, increase runoff and erosion significantly. This action negatively affects fisheries by increasing sedimentation of streams and reservoirs.

At present, the habitat over most of CMR limits the nesting, foraging, and denning activities of existing wildlife species. The larger ungulates such as elk and bighorn sheep compete directly with cattle for forage. The cattle remove forb and grass species preferred by these ungulates. The wildlife species, overall, are limited by the lower plant species

diversity resulting from overgrazing. Clearly, there is a need on CMR for a habitat management plan which provides for a reduction in the cattle's degradation of wildlife habitat.

The conditions on CMR are typical of much of the 622 million grazable acres in the eleven western states. Overgrazing in the western states has been a major factor in rangeland deterioration for many years. The climax grassland communities which originally supported large herds of bison, antelope, and quail have been replaced by subclimax stages which inhibit the productivity of these wildlife species.

FWS has the authority and legal obligation to reverse the deterioration on CMR. The National Wildlife Federation endorses the goals and effects expected from the DES proposed action (Table 13, et p. 80) as well as the FWS's effort to "preserve, restore, and manage in a generally natural setting a portion of the nationally significant Missouri River Breaks and associated ecosystem for optimum wildlife resources. . . ." (DES, p. 4.)

DES Alternatives

NWF used four criteria to evaluate the DES alternatives: (1) Does it satisfy the goals and objectives for CMR; (2) does it comply with existing law and FWS policy; (3) is it economically feasible; and (4) does it minimize the economic hardship on livestock operations on CMR?

Of the five alternatives discussed in the DES, only two fulfill the goals of CMR as mandated by Presidential and Congressional action: the proposed and the intensive management alternatives.

The no action and multiple-use alternatives both place the protection of wildlife values on an equal or subordinate position to other uses such as grazing or recreation. Neither provides significant improvement of the presently deteriorated wildlife habitat, and both would require legislation changing the existing Congressional and executive policy that the primary purpose of CMR is for wildlife.

The intensive management alternative would provide significant improvement in wildlife habitat, but is less economically feasible because substantial budget increases as well as changes in FWS policy would be necessary. Moreover, CMR grazing permittees would undergo greater economic hardship if the intensive management plan were fully implemented.

FWS has also incorporated a plan for federal acquisition of all private and state inholding on the Refuge into the intensive management scheme. This action would not only be prohibitively expensive, but would also require changes in Montana State Land Board Policy. For these reasons, NWF does not favor the intensive management alternative.

The Proposed Alternative

The proposed alternative recommends a 33% reduction in grazing AUM's, in addition to a number of other habitat management techniques. FWS studies indicate that under the proposed management plan, overall habitat quality in the Refuge will improve between 16 and 105%, depending on the particular wildlife species evaluated. Proposed ratings for security cover, nesting sites, and forage for individual wildlife species show a general increase from the fair to good category.

NWF supports these wildlife habitat improvements but recommends that FWS explore other alternatives which would achieve

the same objectives yet minimize the adverse economic impacts on existing livestock operations. Our support of the proposed alternative is contingent upon FWS's demonstration that no other alternative will achieve its goals and objectives while mitigating economic losses to existing grazers.

The Final Environmental Impact Statement ("FES") should evaluate certain alternatives to minimize disruption of existing grazing operations. For example, the option of utilizing a rest or deferred rotation system was mentioned in the DES, but not rigorously explored or evaluated. These rotation systems, as well as other alternatives which BLM and the Forest Service use to manage grazing on public lands, must be evaluated to see if they provide sufficient wildlife habitat improvement to meet FWS's goals and objectives.

If, after careful scrutiny of less burdensome alternatives, FWS determines that the goals and effects of the DES proposed alternative can best be achieved by the 33% reduction in grazing allotments, then it should be adopted with whatever means are appropriate to mitigate any resulting economic impact. If there are no methods to mitigate losses to existing ranchers and still achieve the wildlife purposes for which CMR was established, then the commercial interests must yield to the primary goal of wildlife management. Nonetheless, the elimination of existing commercial uses should not be undertaken unless justifiably necessary for wildlife enhancement and protection.

Additional Considerations

The proposed alternative also recommends a combined program of soil ripping, shrub and tree planting, prescribed burning, and fencing. These techniques are all designed to increase the diversity and plant productivity of the Refuge. The Federation generally supports these wildlife enhancement

measures, but requests that the FWS address the following points in the FES:

1) Fencing is particularly useful in protecting riparian areas from cattle infiltration, improving spawning habitat for fish, securing nesting and feeding habitat for waterfowl, and decreasing stream sedimentation. NWF is concerned that fencing on CMR be designed so as not to impede the migration patterns of the large animals such as elk, antelope, and deer.

2) Some soil types characteristic of CMR such as panspots and dense clay sites do not promote high plant productivity. The proposed soil ripping process can be very effective in increasing the water retention capacity of the soil and thereby promoting plant productivity. However, in many cases ripping is only a temporary measure. The long term effectiveness of the soil ripping process depends on the environmental factors which have created these panspots and dense clay sites. FWS should explain the nature and causes of these panspots as well as evaluating alternatives to soil ripping. If soil ripping is the only possible alternative, FWS should ensure that there will be proper management of ripped areas so that they will not regress to low productivity areas.

3) The DES is deficient in its discussion of nongame species. The introduction to the alternatives section states that sharp-tailed grouse, mule deer, and pronghorn will be used as indicator species, and improvement in their habitats will mean improvements for eighty percent or more of other resident species. In discussing the alternatives, other game species (elk, white-tailed deer, upland birds) are often mentioned. However, the lack of discussion on nongame species suggests that the Refuge will be managed primarily for game species. NWF emphasizes the need for a balanced wildlife program which gives consideration to all species; both game and nongame.

4) NWF stresses the need to preserve and enhance vital waterfowl habitat. The reservoir provides habitat for osprey, cormorants, and great blue herons, while prairie falcons and golden eagles nest in cliffs along the breaks. In the initial habitat study, waterfowl on CMR received the lowest wildlife habitat ratings of any species or animal group on the Refuge. Vegetation, pond size, and nesting sites were all rated as poor, and therefore limiting to waterfowl. Although the management plan focuses on the improvement of mammalian habitat, the FES should clearly outline its management plans to enhance avian habitats, particularly for waterfowl.

5) The DES is inconsistent in its discussion of rangeland conditions. It states that CMR's range conditions on 74% of the grazing allotments are in good condition, and 18% in excellent condition. Range conditions for unallotted portions of CMR are categorized as "predominantly excellent." These statements are inconsistent with FWS's determination that overgrazing has caused sufficient deterioration in the condition of vegetation on the Refuge to warrant a 33% reduction in grazing allotments. FWS should clarify the discrepancy between these statements.

Summary

The National Wildlife Federation commends FWS on its efforts to protect, preserve, and enhance the wildlife values of CMR, but feels a more thorough exploration of management alternatives is necessary. Although NWF supports the wildlife/recreational objectives of the proposed alternative, we urge that, given the potential economic hardship which CMR livestock operators may undergo as a result of the proposed cut in allotments, FWS consider alternative management strategies in the FES which satisfy its goals and objectives, while minimizing economic hardship on livestock operators.

Response to National Wildlife Federation

1. Upon further study, FWS has concluded that it will not be necessary to acquire all private and state inholdings (see amended text).
2. There are presently six rest-rotation and two deferred grazing systems in operation on CMR. FWS believes these systems to be less effective for wildlife abundance and diversity than light seasonal grazing with a favorable season of use. Furthermore, intensive systems are a much more expensive alternative and detract more from naturalness than the type of grazing generally suggested in the Proposed Action. Two of these will be monitored intensively in the future to determine the applicability of these systems to wildlife habitat management.
3. All fencing on CMR will be in accordance with FWS standards for fences in wildlife areas. These standards were designed to provide for passage by wildlife to the extent possible.
4. After reviewing public comment and reexamining pertinent research, the FWS has concluded that soil ripping is not a viable manipulative technique for habitat management on CMR. All references to ripping have been deleted from the Proposed Action.
5. There is no intent to manage CMR primarily for game species. It became apparent by fulfilling the habitat requirements of sharp-tailed grouse and mule deer, the habitat requirements of many other wildlife species would be met. Improving habitat for these species on the many diverse vegetative sites provides for a diversity of wildlife and wildlife habitat.
6. CMR contains little waterfowl habitat or areas with feasible development potential. Intensive and expensive development of waterfowl habitat in the UL Bend area of the refuge is proposed for the Intensive Wildlife Management alternative, but is not believed appropriate for the Proposed Action because of concerns for cost and naturalness. The Proposed Action should raise existing ponds suitable for waterfowl from their present condition to good condition. Fort Peck Reservoir's value is providing habitat for molting and staging waterfowl. Few management options exist for enhancement of the reservoir.
7. Range condition was not the sole criterion used in determining the level of grazing found in the Proposed Action. Soil stability, degree of slope, distance from water, residual cover requirements, etc., were used to determine the amount of forage excess to the needs of wildlife. Presently, there is not a direct correlation on CMR between good range condition and good wildlife habitat for most species. Alternative B in the text proposes to correct this situation.

National Wildlife Refuge Association



P. O. Box 124
Winona, Minnesota 55987
507/464-5940
November 25, 1980

Mr. Erwin W. Steucke, Jr., Area Manager
U. S. Fish and Wildlife Service
Room 3035, Federal Building
316 North 26th Avenue
Billings, MT 59101

Dear Mr. Steucke:

The National Wildlife Refuge Association is a private, non-profit organization with a nationwide membership of people from all walks of life--people who have a common, fundamental concern for the preservation and perpetuation of our great National Wildlife Refuge System.

The National Wildlife Refuge Association is pleased to be able to comment on the Draft Environmental Impact Statement on the management of the Charles M. Russell National Wildlife Refuge. My comments reflect the opinions of Association members who have some knowledge of the management needs of the CMR Refuge, from both a professional and a user vantage.

The National Wildlife Refuge Association supports the natural management concept. This will leave the refuge essentially as it is now with no large scale water developments and no interior fences.

The National Wildlife Refuge Association strongly supports the overview statements on page 9, except for No. 3. These parameters will serve as logical guidance to many beneficial actions.

The Association supports Alternative B (Proposed Action) but modified to include some of the elements found in Alternative C (Intensive Wildlife Management).

For example, we cannot accept the statement that existing private cabins should remain. We suggest that they be phased out since such use is not compatible with the primary purpose of the CMR. Continued use of the cabin sites would also appear to be in violation of Title 43, Section 21, and Title 50, Section 26.35, of the Code of Federal Regulations. Neither can we endorse shrub planting or soil ripping because of high costs, except where endangered species would benefit from such practices. We support boundary fencing only if it is necessary to achieve habitat objectives that cannot be achieved in another manner.

We do not consider boat ramps and a well planned access road network to be incompatible but an essential part of the refuge's

Dedicated to the preservation and perpetuation of the National Wildlife Refuge System.

public use facilities. Correct management of the refuge's recreation must include primitive facilities to make use of the surplus game animals, fishing and outstanding scenery. Without such facilities the CMR wildlife populations and other resources will be poorly managed, with some areas overused and other large areas without visitation.

The reintroduction of black-footed ferret, swift fox and peregrine falcon should receive very high priority. Also, the area's unique species such as bighorn sheep, burrowing owl, mountain plover and upland sandpiper should receive very high consideration in all planning and management actions, even to the disadvantage of mule deer and elk on small to moderate sized areas.

We prefer the grazing scheme generally set forth in Alternative C. The draft EIS states that this type of grazing results in greater overall benefits to wildlife than Alternative B. It is also more in keeping with the present U. S. Fish and Wildlife policy on grazing and agricultural practices on National Wildlife Refuges. This policy states:

"Grazing, timber harvesting, and agricultural practices may be abusive and should be used only when necessary for proper management of wildlife resources, keeping in mind the desirability of maintaining natural ecosystems."

The draft EIS only peripherally discusses seasons of use for livestock. In the context of habitat improvement or manipulation, "season of use" will have as big an impact on habitat as the AUMs utilized by livestock. We therefore recommend that "turn-in" dates in refuge pastures should not be before June 15 on season-long pastures or May 15 on units with rotation grazing systems, unless earlier dates are needed for habitat manipulation.

An in-depth analysis of predator control is also avoided by the draft EIS. The proposals on predator control also seem to conflict with FWS policies concerning predator control on refuges, which states:

"Use of pesticides and animal control should be last resorts, employed when no feasible alternatives exist, used only when necessary for proper management of wildlife, and keeping in mind the desirability of maintaining balanced ecosystems. These practices are generally inimical to wildlife conservation, and their use should require special justification."

On March 29, 1979, Assistant Secretary Robert Herbst further elaborated that:

"Animal control will be undertaken to assure balanced populations consistent with the optimum management of refuge habitat. In no instance should control programs be based solely upon a need to alleviate damage to economic users (such as farmers and grazers)."

At least one of the two viable alternatives (Alternative B or C) in the draft EIS should reflect the current FWS policies regarding predator management on the CMR Refuge.

The various archaeological and historic sites found on CMR should be retained in their present form without any additional management or expenditures of funds diverted from wildlife. In no case should wildlife funds be used for the management of these structures.

The Association does not endorse Alternative A (No Action) because there is a need to improve range conditions from their present low levels. The Fish and Wildlife Service should strive to improve range conditions for the benefit of wildlife and other compatible uses.

The Association does not endorse Alternative D (Multiple Use) because National Wildlife Refuges are not multiple use areas. They are established primarily for wildlife. Only through an act of Congress could CMR be removed from the refuge system and made a multiple use area.

Alternative E (No Grazing) is not endorsed by the Association because properly regulated grazing provides a useful wildlife management tool. In addition, we do not believe it desirable to change or revoke Executive Order No. 7509.

In summary, the National Wildlife Refuge Association endorses Alternative B, with the modifications enumerated above. We congratulate the Fish and Wildlife Service for its efforts in compiling this concise and detailed Draft Environmental Impact Statement. We are grateful for the opportunity to submit this written statement.

Sincerely,

Forrest A. Carpenter
Forrest A. Carpenter
President
National Wildlife Refuge Association

Response to the National Wildlife Refuge Association

1. Please see responses to Defenders of Wildlife.
2. Recreation facilities are included in all alternatives.
3. See response #1 above.
4. The FWS concurs with your recommendation.
5. The FWS will conform to its own policies on predator management. This subject has been addressed in two previous EIS's: Operation of the National Wildlife Refuge System, and Mammalian Predator Damage Management for Livestock Protection in the Western U.S.
6. The FWS is in agreement. Wildlife monies will not be used for the management of archeological and/or historic sites on CMR.



NATURAL AREA COUNCIL

145 EAST 82nd STREET, NEW YORK, N. Y. 10022
212 421-0792

RICHARD H. POUGH, President

November 3, 1980

Mr. Erwin W. Steucke, Area Manager
U.S. Fish and Wildlife Service
Federal Building, Room 3085
316 North 26th Street
Billings, Montana 59101

Dear Mr. Steucke:

I appreciate receiving the draft environmental impact statement relative to the "Management of Charles M. Russell National Wildlife Refuge." It is certainly an impressive and, I would assume, very useful document.

May I, without going into great detail, make some general comments. In the light of the facts brought out in the enclosed paper, "Grazing and Haying Effects on Habitats of Upland Nesting Birds," by Kirsch, Duebber and Kruse of your own Service, I wonder whether the refuge can be regarded as having any "excess forage" when viewed in the terms of wildlife's needs.

If there were no livestock on the refuge, it seems to me no predators, coyotes, etc., would need to be controlled. Any excess that tended to spill over into adjacent lands could certainly be taken care of by any of the ranching neighbors who feel the need to do so -- although a great many of them tell me they have nothing against the coyote.

I might also comment on the prairie dogs. Not only should they be encouraged in the interest of the black-footed ferret but also because the dog-town areas are important to the mountain plover as nesting areas.

If Executive Order 7509 needs to be changed, why not take steps to do so? It seems to me there is nothing sacred about it. Virtually the whole West is grazed by livestock. Why not have a few areas that aren't and let them return to, as nearly as possible, the condition they were in before the white man came to America with his livestock?

Sincerely yours,

Richard H. Pough
Richard H. Pough

Enclosure

ADVISORS ON LAND PRESERVATION / COUNSELORS ON IMAGINATIVE PHILANTHROPY

Response to Natural Area Council

1. The FWS believes the type and amount of livestock grazing suggested in the Proposed Action will achieve the wildlife and habitat objectives found on page 5 of the text. Objective 4 on this page will be monitored closely to determine if the level of grazing proposed is appropriate.
2. The predator problem has generally been related to livestock losses off the refuge.
3. The FWS recognizes the value of prairie dogs and their towns in wildlife management.

Natural Resources Defense Council, Inc.

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January 13, 1981

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212 949-0049

Erwin W. Steucke, Area Manager
United States Fish & Wildlife Service
Federal Building, Room 3085
316 North 26th Street
Billings, Montana 59101

re: Draft Environmental Impact Statement/
Management of Charles M. Russell
National Wildlife Refuge

Dear Mr. Staucke:

I have reviewed the above-captioned document and wish to submit the following comments on its contents on behalf of the Natural Resources Defense Council, Inc. (NRDC), a non-profit, environmental membership organization. I appreciate your interest in receiving our written comments despite closure of the formal comment period.

NRDC has long been concerned about the management of livestock grazing on publicly-owned lands within and outside national wildlife refuges. We have been particularly concerned about grazing management on the Charles M. Russell National Wildlife Refuge (CMR), because of its spectacular resources. Indeed, as you may already know, evidence detailing the adverse impacts of the Bureau of Land Management's administration of grazing on the CMR's resources was submitted by us in connection with the lawsuit that led to the preparation of this draft Environmental Impact Statement (EIS), NRDC, et al v. Morton, et al., 388 F. Supp. 829 (D.D.C. 1974). We believed then, and still believe, that the EIS process would provide the Fish & Wildlife Service (FWS) with both the opportunity and the information needed to develop a management plan which would be tailored to its unique wildlife resources.

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Erwin W. Steucke, Fish & Wildlife Service

January 13, 1981

The draft EIS substantiates our concerns. Clearly, livestock grazing has had, and is having, significant adverse effects on the wildlife of the CMR and is preventing the Refuge from fulfilling the objectives for which it was established. Equally clearly, changes in current management practices, including reductions in livestock numbers, are badly needed to fulfill those objectives as well as the FWS's policy regarding livestock use of refuges. While the proposed action recognizes this need for change, neither it nor the draft statement live up to our expectations for the following reasons.

The draft's most serious flaw stems from its failure to comply with NEPA's most important objective -- the consideration of properly selected alternatives. See, e.g., Council on Environmental Quality, Regulations for Implementing the Procedural Provisions of the Procedural Provisions of the National Environmental Policy Act, §§ 1502.14.

The draft purports to consider four "alternatives" in addition to the Service's proposed action. Two of the four, the no action alternative and the multiple use alternative, admittedly "do not provide a wildlife refuge situation." P. 26. According to the draft, the Service lacks the authority to implement the no grazing alternative.* The remaining alternative, the intensive wildlife management alternative, is not only extremely expensive, but would also violate CMR's stated mission, by "destroy[ing] the naturalness of the Refuge." Id.

Thus, the draft considers only one viable alternative -- the proposed action. Obviously, consideration of a single such alternative does not comply with the requirements of NEPA or the CEQ Regulations. Equally obviously, the proposed action is not the only viable alternative for management of grazing on the CMR. Accordingly, we specifically request the consideration of at least

* I believe that the Service does, in fact have the authority to eliminate grazing on the CMR. Nonetheless, this alternative would be extremely difficult and expensive to implement.

3

Erwin W. Staucke, Fish & Wildlife Service

January 13, 1981

one additional alternative in the final EIS which involves use of carefully designed prescriptive grazing to achieve or maintain desired wildlife habitat conditions. This alternative should not involve either the unrealistic acquisition plan or the other management practices that make alternative C unacceptable. In addition, it should directly address the existing conflicts between livestock and wildlife use of key areas, including, in particular, riparian areas.

The draft EIS acknowledges the importance of riparian areas to CMR's wildlife. See, e.g., p. viii. It also reveals that they are currently considered "sacrifice areas" as the result of cattle concentrations. P. 16. Notwithstanding the proposed 33% reduction in livestock use, it is not at all clear that the proposed management will adequately protect these areas and achieve optimum wildlife conditions. In part, this is the result of the draft's failure to explain how the proposed level of use was determined. It is also the result of its failure to provide at least habitat-specific descriptions of the management actions contemplated by the proposed action as well as to analyze the impacts of the proposed action and "alternatives" in such terms.

As far as other elements of the Service's plan are concerned, we support the reintroduction of endangered species in the Refuge, the minimization of so-called range "improvements," and the phasing-out of farming especially along the Missouri River bottoms. We are opposed, however, to predator control practices except where necessary to protect endangered species as well as to the proposal to "rip" as many as 10,000 acres of CMR to improve vegetative productivity. The proposed action regarding predator control is inconsistent with FWS policy while the proposed ripping conflict with the stated mission of CMR.

In conclusion, we appreciate the opportunity to submit these comments. We hope that the final EIS will remedy the problems

Edwin W. Steucke, Fish & Wildlife Service

January 13, 1981

we have identified as well as that the management plan ultimately selected for the CMR will fulfill its mission and the mission of the FWS.

Sincerely,

Johanna H. Wald
Johanna H. Wald

JHW:as

cc: Bill Knauer, Federal Center, Denver, Colo.

Response to Natural Resources Defense Council, Inc.

1. The FWS considered five alternatives including some not within the its augmentation authority (as per CEQ regulations). The EIS refers to using livestock as a management tool in several places, and in fact is actually the main idea in the Proposed Action. Also, please see amended text on pages 18 and 25 for changes that more accurately describe needs for the Intensive Wildlife Management alternative.

2. CMR wildlife habitat was evaluated on a section-by-section basis and actions prescribed for each.

The amount of forage available to livestock was computed on a section-by-section basis. Since there are over 1,000 sections on CMR, a listing of the tabulation of each is beyond the scope of this document. The 32.6 percent reduction is an average of the reductions applied to the sections. See also new Appendices 1b, 2, and revised Appendix 15.

3. Please see responses to Defenders of Wildlife comments.

Public Lands Council

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425-13th Street, N.W.
Washington, D.C. 20004
(202) 347-5355

National Cattlemen's Association

P.O. Box 569
(1001 Lincoln Street)
Denver, Colorado 80201
(303) 861-1904

National Wool Growers Association

600 Crandall Building
Salt Lake City, Utah 84101
Phone (801) 363-4483

December 5, 1980

Erwin W. Steucke, Area Manager
Fish and Wildlife Service
Federal Building, Room 3085
316 North 26th Street
Billings, Montana 59101

Dear Mr. Steucke:

This is to present the comments of the above national organizations on the draft environmental impact statement for the C.M. Russell National Wildlife Refuge.

We agree with the critical comments and review of this EIS submitted to you by Mr. C.E. Hitch on behalf of the Montana Public Lands Council.

Like the Montana Public Lands Council, we found the draft EIS so confusing, indefinite and contradictory that it is difficult to analyze it. As a matter of fact, we believe the draft is so inadequate that a revised draft should be prepared and circulated (as provided in § 1502.9 of the CEQ regulations on implementing the procedural provisions of NEPA) so as to provide a meaningful opportunity for public comments.

The present document appears designed to obscure the significant issues involved in the proposed action and alternatives and to discourage specific public comment. How can the public comment on something so lacking in relevant information and so lacking in identification of goals, choices, and impacts?

Although FWS claims that scoping was done, we fail to see the results in this document, explicitly or implicitly. We are not sure whether it is an EIS on livestock grazing management, wildlife management, or both. At any rate, it fails in every way to present the reasonable alternatives and adequate information that the CEQ regulations indicate is necessary to evaluate the choices and trade-offs that might be involved.

-2-

The alternatives presented in the EIS do not cover an adequate range of management actions nor is there sufficient information presented regarding each alternative so as to be able to understand fully their impacts.

There is practically no information given on how each alternative would affect wildlife. Most of the alternatives would "improve wildlife habitat" we are told and asked to accept on faith alone. Little evidence is presented on how and how much wildlife populations or other related values would be affected by the actions in the alternative programs. Practically no figures are given on present wildlife populations or on expected numbers under the alternatives.

While Executive Order 7509 appears to have withdrawn the area for wildlife numbers and "for the protection and improvement of public grazing lands and natural forage resources", the FWS does not appear willing to operate the area for these purposes. The EIS says, in effect, that wild animal populations or densities are not important, it is habitat quality and quantity that is important whether or not that is helpful to wildlife quantity or quality (or injurious to livestock grazing).

On pages 4, 5, and 6, prior to any discussion of the alternatives, there is presented a listing of CMR goals and objectives. Apparently these objectives are non-debatable as far as FWS is concerned. There is no discussion of these objectives and no EIS was prepared on them or will be prepared on them. They are used only to "prove" that alternatives other than the proposed action are not possible or desirable, according to FWS. To make it even more difficult to evaluate them, the goals and objectives are not quantified or qualified.

Also making it impossible to evaluate just what it is that each alternative purports to do or accomplish are the statements in each alternative description that the Service will develop in the future habitat management plans that will have unidentified effects on grazing and wildlife. In other words, the EIS not only does not tell the public exactly what the Service has in mind at present under each alternative, it hasn't yet decided what it will do. Or perhaps it is just reserving the right to do whatever it feels like in the future no matter what alternative is selected.

If we don't know yet what the proposed programs are under each alternative, just what is it that we are examining in this EIS?

The whole document appears to us to be a rationalization of a decision or decisions already made, in violation of the CEQ regulations. An EIS is supposed to be prepared before major decisions are made or conclusions drawn. An EIS is supposed to help improve the decision-making process. It should identify the benefits and impacts, in kind and size, and give the public an opportunity to comment on pertinent issues. The CMR EIS meets none of these requirements.

The EIS obviously prejudges livestock grazing from the start. The document reveals an abysmal lack of understanding or knowledge of

livestock grazing or range science issues. Perhaps this is because there appears to have been little input from anyone other than wildlife specialists. (The list of preparers on page 104 fails to reveal each individual's experience and qualifications as required by the CEQ regulations.

Examples of the ignorance of livestock and range issues appear in the discussion of economics in Appendix 13: Private rates for grazing are \$10 to \$20 per AUM in the area and since the CMR permittees pay only \$1.89 per AUM they are getting "substantial federal subsidies." Anyone who had even a modicum of understanding of the public land grazing fee formula would not make such a stupid statement. (For your enlightenment, the formula is based on private lease rates and the higher costs of operating on public land.) The error is compounded when \$189 per AUM is used as the direct benefit value. We believe that this proves that FWS is incapable of analyzing livestock issues and at least that part of the EIS should be given to another Federal agency or to a range science group outside the government that has some expertise in livestock grazing and range matters.

Four of the five alternatives involve cuts in livestock grazing. The fifth, the "no action" alternative, involves a continuation of the status quo (no livestock grazing increase). The multiple use alternatives is misnamed. At one point, it is described as an action involving an initial cut and a gradual increase to a level slightly below present grazing numbers; on some other pages the high point is described as a few AUMs above present numbers. There is also a variety of figures given on the amounts of the livestock reductions in other alternatives.

It is apparently accepted as a premise that livestock grazing and wildlife are incompatible. Since this is such a central issue it should have been more adequately covered in the document.

The literature review in Appendix 16 attempts to substantiate the above bias by citing out-of-context selections from wildlife writers. Dr. R.J. Mackie is quoted extensively in this appendix and throughout the rest of the document in words that imply that he believes livestock and wildlife are always in conflict. However, that same Dr. Mackie is cited as indicating that information is lacking with respect to impacts of grazing on wild ungulates. We understand that Dr. Mackie has recently stated that existing studies have not produced substantive evidence for the existence of livestock/wildlife competition generally, nor more than very general conclusions about the exact nature and importance of such competition.

Appendix 16 also reveals that those cited are saying that there may be diet and other competition between wildlife and livestock in "overgrazed" situations--not all situations! But the EIS reveals that 85 to 95% of the range in the CMR Refuge is in "good" or "excellent" condition!

It is obvious that the severe grazing reductions in the Proposed Action are not directed at "overgrazed" conditions. As a matter of fact, a comparison between the proposed cuts and the range condition allotments by allotment indicate that there would be severe reductions in areas in which all the land is in good or excellent condition.

This study shows there is no correlation between allotment range conditions and proposed grazing reductions in the Proposed Action.

We also found no information in the document on range trend nor any substantiation of the assertion that the Proposed Action would increase the amount of land in "excellent" range condition. We recognize that the EIS makes a differentiation in a couple of places between range condition and habitat condition. "Poor" range condition is best for prairie dogs, it indicates. But it is impossible to track just how and how much FWS is going to decrease range conditions under the Proposed Action in order to increase habitat conditions!

In summary, for the reasons mentioned in this letter and in the letter from the Montana Public Lands Council, we believe that it is imperative that the draft statement be discarded and a more intelligible draft statement be prepared.

Sincerely,

Ronald A. Michieli

Ronald A. Michieli
Director, Government Affairs
For Land and Natural Resources;
NCA Executive Director, Public
Lands Council

RAH/mes

Response to Public Lands Council, National Cattlemen's Association,
and National Woolgrower's Association

1. As stated in the Foreword, "This Environmental Impact Statement follows the Council of Environmental Quality guidelines for National Environmental Policy Act documents as amended July 30, 1979." The EPA rated this document as LO-1 (Lack of Objection - sufficient information); therefore, FWS believes the document is adequate.

Scoping was completed as outlined in the last paragraph on page 1. The Multiple Use alternative was a direct result of the scoping process, i.e., many persons expressed a desire to have the refuge under the multiple use concept.

Wildlife management and livestock grazing on CMR are inseparable. Thus, the EIS covers both aspects.

2. The EIS purposefully does not address population numbers but wildlife habitat (see page 1, Foreword, paragraph 4). The effects of the five alternative actions on wildlife habitat are discussed in the Wildlife Habitat-Range Resources section of the consequences of each alternative. Wildlife populations are modified by actions of man as well as nature.

Executive Order 7509 established CMR for "the conservation and development of natural wildlife resources and for the protection and improvement of public grazing lands and natural forage resources." The Executive Order further establishes two priority wildlife species and that forage surplus to the needs of wildlife be available for domestic livestock. The EIS recognizes habitat as the key to wildlife abundance (numbers).

3. According to CEQ Guidelines (Sec. 1502.1 Regulations for Implementing the provisions of the National Environmental Policy Act), the purpose of an EIS is to discuss the impacts on the environment of various alternatives and methods of reaching or attaining certain goals and objectives; not a discussion of the rationale supporting those goals and objectives. Such rationale comes from legislation and Service policy and is contained in program management documents on file in the FWS Lewistown office.

The goals and objectives were developed early in the planning process and presented at the public meetings for comment and revision. The level of detail requested here is beyond that appropriate for an EIS.

4. Although most of the refuge staff have wildlife degrees rather than range, they also have almost 110 years of grassland management experience with federal land management agencies. In addition, two staff members have degrees in range management.

5. Your concern over the \$1.89 on AUM is correct in that the \$1.89 fee does not reflect the value of the AUM to the ranch operation. This has been corrected by adopting a linear programming (LP) approach to estimating the financial impacts to the rancher.

The LP analysis estimates the change in gross income associated with a change in CMR AUMs. The LP measures changes in rancher cash expenditures, labor inputs, returns to investment, and beef cow inventories. The analysis does this using an average ranch budget for ranches of different ranch size classes. These budgets take into account numerous factors including seasons of use and differences in dependencies. This approach tailors the analysis to the regions and ranches by reviewing the ranch budgets with a representative rancher panel for EIS area. In this case the value per AUM was \$12.87.

This technique is being applied to analyze similar grazing actions for BLM. The National Cattlemen's Association and Public Lands Council support this approach to impact assessment. See Appendix 10 for example inputs and outputs. The subsidy results not from a flow of federal funds (\$106,830 out and \$15,133 back), but from a resource subsidy to ranchers who receive a AUM worth substantially more than \$1.89 to them for \$1.89. It is this difference that generates the subsidy.

6. If FWS accepted a premise that livestock grazing and wildlife were incompatible, there would be no grazing on CMR. FWS believes that grazing under certain conditions, as to time, area, and intensity, is compatible with wildlife. Thus, FWS believes the issue is covered adequately in the document.
7. FWS would like to point out that range condition and wildlife habitat condition are not the same. See Foreword.



Sierra Club Northern Great Plains Region

Bruce Hamilton
Regional Representative
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Lander, Wyo. 82520
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Rose McCullough
Assistant Representative
715 South 14 St.
Lincoln, Neb. 68508
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Dec. 2, 1980

Erwin W. Steucke, Area Manager
U.S. Fish and Wildlife Service
Federal Building, Room 3035
316 N. 26th St.
Billings, Mont. 59101

Dear Erwin W. Steucke,

Thank you for keeping me informed about planning for the Charles M. Russell National Wildlife Refuge. The CMR is one of the most spectacular and controversial refuges in the system. Unfortunately, political considerations, rather than ecological considerations, are all too often the basis for management. You and your staff are to be commended on the recent draft environmental impact statement because it tries to steer clear of the adverse local political climate and tries to chart a course that is right for the wildlife resources that are entrusted to you as guardian of the CMR.

Future management directions should not be bound by past mistakes. The OES outlines the problems with existing management and the consequences of no action quite clearly (pp. 62-68). If this is an accurate representation of the situation it is obviously unacceptable and reform is needed. It's amazing that stocking rates are still set on the basis of a 1952-53 range survey.

Overall, I think you have chosen a prudent course in alternative B, the proposed action. However, I should limit my endorsement by adding that there are parts of the proposed action that I disagree with or am uncertain about because too little information is provided. I should also add that the proposed action looks the best because all the other alternatives aren't really available choices or are unacceptable. A more realistic range of alternatives would have made a choice harder, but more meaningful.

As stated earlier, the no action alternative has led to a steady degradation of key parts of the CMR. (It should have been pointed out that present management has not been detrimental to most of the CMR and that the conflicts that deserve immediate attention are limited to a small, but highly critical segment of the entire refuge.) In your own words (p. 26) the no action and multiple use alternatives "do not provide a wildlife refuge situation." Also the multiple use option is not allowable under existing law. Similarly, the no grazing alternative is not possible under existing executive order. The intensive wildlife management alternative is too costly to implement and, by your own admission would "destroy the naturalness of the refuge" (p. 26)—a result that violates the stated mission of the CMR. In summary, there are no serious options to choose from. All the alternatives are straw men. I would have preferred to see a series of variations of the proposed action with different realistic mixes of livestock curtailment, range improvements, land treatment, inholding acquisition and wildlife species reintroduction. Instead, by endorsing the proposed action we end up giving you a blank check on some fairly significant decisions.

For example, obviously a change in livestock management practices is warranted and probably a significant cut in livestock use is necessary. But where did the magic number 33%

"Not blind opposition to progress, but opposition to blind progress."

3

Roads: There is some discussion in the appendices about the adverse impact of roads on big game and other wildlife. Shouldn't a travel plan/road closure policy be part of this plan?

Air quality: In the "affected environment" section (pp. 31-36) there is no discussion of present air quality, future threats to that quality, and measures available to protect present quality.

Fires: In the OES there are general statements about how much land might be subject to prescribed burning. I would prefer to see a fire management plan where the refuge is zoned into areas where wildfires will be allowed to burn, areas where prescribed burning will be pursued, and areas where immediate fire suppression will be necessary.

Mineral development: The CMR has marginal deposits of oil, gas, aggregate, bentonite and coal (p. 36). Who owns the mineral? Is any of it withdrawn? How will the FWS deal with development proposals if any surface? Why wasn't this addressed in the OES?

Thank you for the opportunity to comment. Please send me a copy of the final EIS and any other news about the CMR.

Sincerely,

Bruce Hamilton
Bruce Hamilton
Regional representative

2

come from? It's impossible to follow the extrapolation from the summary of Mackie's work in appendix 15 to the conclusion that a 33% cut is warranted.

I'm also concerned that the livestock reduction may not translate into an improved on-the-ground situation at CMR. Most of the critical conflicts occur in riparian zones that are scarce and heavily used by both livestock and wildlife. Will a 33% reduction in stocking levels reduce this conflict? Or will the remaining cattle continue to congregate in the riparian areas?

It seems to me that site specific grazing management programs would be useful, and would also be more in keeping with the requirements of the NRCC court case. You state (p. 10) that plans for each allotment will be prepared by 1985. Perhaps I'm just too impatient. Under each alternative I'm told how much additional fencing, ripping, water development, etc. to expect. But I'm never told where to expect it. Will you be fencing riparian zones? Will there be an attempt to develop water on dry low-slope areas to disperse livestock use? Is the ripping a one-time-only treatment to restore a trampled, eroded area or is the ripping a periodic intensive management treatment? Are you trying to build up big game herds to a point where additional livestock cuts will be necessary in the future? Does establishment of set grazing rotation systems preclude the use of prescription grazing to accomplish short-term vegetation manipulation?

I'd also like to comment on a few specific proposals:

Endangered species reintroduction: I'm generally very pleased with your announced program. Does availability limit the number of peregrine reintroductions to two?

Bison: Under alternative C you suggest bison reintroduction in U.L. Bend. Why wasn't bison reintroduction explored in more areas and considered part of the proposed action?

Bighorn sheep: I'm concerned about plans to introduce more sheep when you aren't sure why the last population crash occurred.

Predator control: On a wildlife refuge I would hope predator control is only carried out in extreme situations, such as when endangered species are threatened. Wildlife refuges are established for all native wildlife—not just game species. With this in mind I would strongly oppose proposals to control coyotes to "protect" big game species.

Farming: Most farming should be phased out. While row crops may help some exotic species like pheasants they take native habitat from native game birds. Some minimal farming around the edges of the CMR to minimize wildlife conflicts on surrounding cropland may be justified—if it can be demonstrated that this technique works. Farming in riparian zones should be phased out—especially along the Missouri River bottoms.

Ripping: I fail to see how ripping makes sense if you are trying to maintain the natural setting. One time ripping of severely abused areas may be justified. But ripping to "improve wildlife habitat and reduce soil erosion" (p. 20) at the same time you are phasing out farming seems at cross purposes. Especially in times of agency budget cutting, minimal manipulation should be the rule.

Pool level management: Does the FWS work with the Corps of Engineers to try to make sure the pool level of Fort Peck Reservoir is managed in a manner that does not harm fish and wildlife? Should this be part of the refuge master plan? Are there other COE plans that could conflict with FWS plans where management direction is needed? Would major industrial water marketing from Fort Peck Reservoir for coal development severely impact CMR? If so, can steps be taken to minimize the damage?

Response to the Sierra Club, Northern Great Plains Region

1. The amount of forage available to livestock was computed on a section-by-section basis. Since there are over 1,000 sections on CMR, a listing of the tabulation of each is beyond the scope of this document. The 32.6 percent reduction is an average of the reductions applied to these sections. See new Appendices 1b, 2, and revised Appendix 15.
2. The Proposed Action will exclude livestock from over 90 percent of the riparian habitat along the Missouri and Musselshell Rivers within the refuge. Much riparian habitat will receive little or no livestock grazing. Other riparian areas will still have light to moderate livestock use, but seasons of use will be favorable for some recovery. Livestock grazing in all habitats on the refuge will be governed by the wildlife objectives on page 5 of the text. If the proposed level and type of grazing do not allow these objectives to be achieved, grazing will be modified.
3. See response #2 above. Also, the exact locations of some of the developments are beyond the scope of the EIS. After reevaluation of data and comments, ripping has been deleted from the Proposed Action and the text revised. Development of additional water on the refuge would be detrimental to most wildlife in that it would distribute livestock into areas now used almost exclusively and needed by wildlife. It is not the intent of the FWS to increase big game populations beyond the levels proposed in the wildlife objectives. The FWS believes the level of grazing set forth in the Proposed Action is compatible with these objectives. While rest rotation grazing systems would not preclude the use of prescription grazing for short-term habitat manipulation, it reduces the visibility of such an option.
4. In the planning process, a detailed discussion was held concerning this subject. The decision was made not to reintroduce bison onto CMR (including U.L. Bend) because of increased fencing costs, surplus animal disposal problems, and impacts on refuge activities. The FWS will, however, work with any permittee desiring to replace cattle with bison.
5. See response #3 above.
6. A Memorandum of Agreement (Appendix 3) between the COE and FWS recognizes the primary use of CMR as a wildlife area and provides a vehicle for ensuring that the mandates of both agencies are met. The FWS, Montana Department of Fish, Wildlife, and Parks, and COE will work together to ensure the best possible fishery management within the constraints of primary mandates of the COE. Industrial water marketing is speculative at this time and beyond the scope of the EIS.

7. Several hundred miles of designated roads exist on the refuge. Those suitable for continued use will remain open, while those susceptible to landslides, washouts, and wildlife conflicts may be abandoned or changed. The travel map is beyond the scope of the EIS but is available at Lewistown, Slippery Ann, Jordan, and Fort Peck headquarters.
8. The "Affected Environment" section deals only with those resources which may be impacted or may impact the alternatives. In general, air quality is not one of these at CMR.
9. A refuge-wide fire management plan will be developed before wild-fire and/or prescribed fire is integrated into habitat management on CMR. Your suggestions have merit and will receive consideration.
10. Ownership of mineral rights on CMR is fragmented between the COE, FWS, State of Montana, and private individuals. Some COE lands are withdrawn from mineral entry at this time. Development proposals on FWS lands will be considered by the Secretary of the Interior and a determination made in accordance with refuge objectives and energy policies at that time. Executive Order 7509 addresses mineral exploitation; please see Appendix 4, page 159.

1100 Missoula Avenue
Helena, MT 59601
November 22, 1980

Wally Steucke, Area Manager
U. S. Fish and Wildlife Service
Federal Building, Room 3035
316 W. 26th St.
Billings, MT 59101

cc: CMR

Dear Sir:

This comment responds to the draft environmental impact statement for the Russell Wildlife Refuge. Our interest is that the refuge be managed for the benefit of wildlife--that any livestock use reinforce this objective. This management should be accomplished by use of natural methods to the fullest extent possible.

The Russell Refuge can demonstrate the value of wildlife refuge for other purposes, such as benefits from healthy watersheds and for public enjoyment. Control of livestock trespass is essential for this program. Roads should be kept to a minimum.

We question the validity of three of the options: "A - no action" is not a benefit to wildlife habitat; "D - multiple-use" increases livestock use and develops ponds and fences to pull livestock into unused areas--probably now of primary value to wildlife. (The term "multiple-use" could easily encompass the other options in varying degree); "E - no livestock" is not a viable option since it is not politically or socially acceptable. "A" and "D" circumvent the various legal requirements to make the refuge of primary benefit to wildlife.

The EIS cites many instances where cattle grazing and wildlife are in conflict, but is only general on the location and degree. It also notes that cattle can be grazed to provide some beneficial results for antelope and deer habitat. There is considerable literature backing up the conflicts, but the beneficial results of overgrazing are probably outweighed by soil erosion and detriment to most wildlife habitat.

The EIS seldom gets into specifics. Unless this is done, intelligent comment is difficult. Examples of where the EIS should provide more information follow:

1. Acres and location of conflict between livestock grazing and ground nesting birds such as sharp-tail grouse.
2. Acres and location of conflict between cattle, deer and elk, particularly on big game winter range.
3. Condition, location and acres of primary cattle range, particularly areas in fair and poor condition.
4. Soil losses in tons/A attributable to overuse.
5. Production of forage for cattle on primary ranges on lbs./A basis.

Examples of the difficulty of piecing together scattered bits of information follow:

From your description of the range conditions it appears that most of the livestock use falls in the "fair" classification of 7% of the area, or on about 58,000 acres. AUMs of use on the Russell is given as 56,524 AUMs. Since a very large share of cattle use is on the fair condition range, the use approaches 1 AUM/acre. Unfortunately, no production or acreage figures are given for the primary range areas. On page 175 the average production/acre on given excellent ranges averages about

Wally Steucke

Page 2

November 22, 1980

1200 lbs./acre. On fair range, production would be no more than half or 600 lbs./acre. If 30 to 40% is proper use, then it takes not one acre but three to four acres per AUM. These figures are only applicable as averages because of the lack of information. They could indicate that your proposed reduction of use may be optimistic.

Where use is heavy, cattle tend to browse more. This brings their use into conflicts with sharp-tail grouse and pheasants which use buffalo berry, chokecherry, and other brush for food and cover. Heavy use also reduces available browse for elk and deer in the winter.

You do not indicate how you plan to handle the reductions. Reducing numbers, particularly on seasonal range, will pull cattle off the steeper slopes and areas further from water but otherwise does not do much to lower concentrations nearer water.

Reducing spring use (which may be planned but not shown) will provide much greater benefits than reductions in numbers of cattle.

We generally support the CMR goals, wildlife and range objectives on pages 4, 5, and 6. We applaud your proposal to introduce peregrine falcons, black footed ferrets, and the Rocky Mountain bighorn.

In conclusion, we wish to emphasize that these public lands have been set aside for the benefit of wildlife. The goals of improving wildlife habitat on these rough lands are in harmony with protecting the land and water for the long-range public interest.

However, we do not oppose reasonable grazing by livestock where this meets the primary wildlife objectives.

At this time the F and W "Proposed Option B" substantially improves the position of wildlife on the refuge, with some allowance for livestock use. We support the F and W proposal "B."

Sincerely,

Noel Rosetta

Noel Rosetta, Resource Consultant
Upper Missouri Croup Sierra Club

Response to the Sierra Club, Upper Missouri Region

1. The information requested is beyond the scope of this document. Much of the information is contained in refuge files which are available for your examination at the refuge headquarters in Lewistown, Montana.
2. According to the Montana State Office of the Soil Conservation Service, no monitoring programs of this type have occurred on CMR, and thus, this type of data is unavailable.
3. See response #1 above.
4. AUM reductions are on an allotment-by-allotment basis, depending on the needs of wildlife in each allotment. In general, going to light grazing, as provided for in the Proposed Action, will result in light to moderate grazing in level areas near water. In steep terrain and away from water, there will be little, if any, livestock grazing. Also, in general, turn-on dates for livestock will be later in the spring than at present. Livestock grazing in all habitats on the refuge will be governed by wildlife objectives; if the proposed level and type of grazing do not allow these objectives to be achieved, grazing will be modified.

Valley County Development Council

Courthouse Annex, Room 2
Post Office Box 832
Glasgow, Montana 59220
Tel: (406) 228-9389

November 26, 1980

Erwin W. Steucke, Area Manager
Fish & Wildlife Service
Federal Building, Room 3085
316 North 26th Street
Billings, Montana 59101

RE: Expansion on brief Oral Statement presented at the October 30, 1980
Public Hearing held in Glasgow, MT. by the U.S. Fish and Wildlife
Service addressing the Draft Environmental Impact Statement (DEIS)
on future management of the Charles M. Russell National Wildlife
Refuge (CMR).

ORGANIZATION PRESENTING STATEMENT

The Valley County Development Council (VCDC) which has been designated by the County Commissioners as the 'Overall Economic Development Program Committee' for Valley County since 1968. This organization has a county-wide coordinating and planning position in association with the various organizations, special committees, cities, towns, county, state, and federal departments and agencies. A considerable portion of this is directed to our natural and renewable resources as a priority subject. Statement presentation by Manson H. Bailey, Jr., Executive Director, by approval of the Board.

STATEMENT

The subject of this Hearing is of great importance to all people, most especially those of the six counties wherein the CMR is located and eastern Montana as a whole. The manner of its management has and will have a great impact to the many interests associated with it. Of the four hearing designations this is the nearest and most familiar to the subject. It is our hope that the "voice of the land" be heard by those here and associated in the coordination of the final management draft.

The Draft demonstrates that a tremendous amount of work has been done in research and assembling the DEIS. It is presented to the public to voice certain choices and as in any book review, to meet the critics. These remarks will be tempered by the writer's personal memory and association with the CMR since the first Executive Order establishing the Fort Peck Game Range in 1936. More closely associated the past 30 years in many capacities which include being a member of the County Soil Conservation District Board, 1951-57, Member of the Montana Fish and Game Commission 1952-56, Member of the State Legislature in the 1960's, presently serving as a member of the Montana State Historical Society Board of Trustees, and in this present position of development director since 1969, Member of the third generation of pioneer Valley County settlers.

Keep Valley County Growing

Erwin W. Steucke, Area Manager
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November 26, 1980

o **Cooperative Advancement:** It was through a great amount of effort and cooperation on the part of many entities and individuals that the resources were improved and the wildlife returned in great abundance to the prairies. Elk - In the 1940's and 1950's was a period of large Sportsman Clubs in Eastern Montana. Through a cooperative move, these clubs pooled resources to finance the introduction of Elk on the Game Range in south Valley and Phillips Counties, from Yellowstone Park in the bad winter of 1951-52. Submitted as **EXHIBIT I** is a copy of a recent news story on the elk of the CMR. The ranchers of the area agreed to the introduction which has been most successful, but the numbers far exceed what was agreed upon at that time. It should be noted that they cover great distances in their movement on and off the CMR and on Federal, State, and Private lands. It was ranch stock trucks which were furnished in transporting the elk here with stockmen doing the driving, as they were accustomed to handling stock. There were considerable hardships encountered. **Examples:** Three trucks were traveling together at night in stormy weather trying to make the trip as soon as possible. One truck became separated and in bad conditions slipped off the road and partially tipped over. The two men were able to hold the elk in the truck, they searched out and obtained another truck. These two big cowboys hand wrestled one elk at a time from one truck to the other and continued on. These were Frank Lock and Jack Rosenwald. It took considerable repair on the first truck. (Later both of these men dealt for ranches with grazing extending onto the CMR, one in Phillips County and one in McCone County.) Another truck with Bob O'Brian was traveling on a County road in Phillips County south of Saco, where the engine broke down. It was not far from the destination, so the elk were unloaded and guided by airplane into the "Larb Hills." Some trucking bills were never paid.

Fish and Wildlife Management Headquarters were established at Fort Peck. The first "pointed" Canadian Geese brood flock was established at Bowdoin refuge in 1951, which established the local population in this area, later one was established at the western portion of the CMR at U. Bend area in 1955.

Forage allotted to domestic livestock on the CMR was reduced. Mule Deer and antelope reached explosive numbers throughout the prairie lands of northeast Montana not just the CMR. It must be noted that 1080 used in coyote control had a considerable influence in this increase.

Fort Peck Interagency Committee: One of the greater cooperative influences was the establishment of this committee in 1955. See **EXHIBIT II**. This was made up of all the different agencies and interests both public and private associated with the entire Fort Peck Project. Fish and Wildlife Service, Corps of Engineers, Montana Fish and Game Department, State Parks, Counties, State Highway Department, Sportsman, Grazing Districts, Ranchers, Fort Peck Forward, and other private interests. This group met twice annually at different cities in the counties around the project. It has no official authority but through cooperative influences and dedication, great advancements have occurred.

Rancher cooperation throughout all of this advancement has been good, even in the light of the damages they sustain in crop damage by wildlife and the numbers of recreationists they accommodate on private lands as well as public lands.

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HISTORY

Most planning documents feature a history relative to the subject being addressed, which has a considerable bearing on future goals. In reviewing the document, one gets the impression that conditions on the CMR have not been beneficial to wildlife. Yet, in actuality, history does not bear this out nor does the range site condition survey of the DEIS. May we present some background history which may be beneficial to those not of this area and those in planning of a final document.

o **Authorization:** President Franklin D. Roosevelt's Executive Order establishing the Fort Peck Game Range, December 14, 1936, (DEIS pages 157-158), mentions reserve of forage for 2 species of wildlife, sharp-tailed grouse and antelope (this is about all there was at that time), and mentioning further availability of forage for livestock as to be compatible with wildlife management. It was jointly managed by the Fish and Wildlife Service (F & W) and the Bureau of Land Management (BLM) for some 40 years with very creditable advances in wildlife species and numbers.

o **Conditions:** It must be remembered that in 1936, it was in the middle of the great drought of the west. The only deer in the area were some white-tail along the Missouri River which was just starting to form a lake back of the new Fort Peck Dam under construction. The private landholders of these good valley lands in the six counties were beginning to move off of the land to be flooded.

o **Land Management:** 1934, passage of the Bankhead-James Taylor Grazing Act regarding management of public lands and a return to the states of a portion of the fees collected in their use. 1935, Montana Legislature authorized the Montana Grass Conservation Commission and formation of Cooperative State Grazing Districts under the guidelines of the Taylor Grazing Act. These Districts, of local citizen boards, brought about the first semblance of management of the public lands (building of dams with WPA labor and horses) including the Fort Peck Game Range. 1937, District I BLM was established in Malta, very few personnel but funds for development of water retention structures was a great assist in the spreading of the grazing pattern for domestic and wildlife and range improvement. Qualifying grazing permits to those operators who could show resources to care for their stock during the period of the year they were not grazing public land. During the 1940's the horses running wild on public lands were taken off, leaving greater amounts of forage for other uses and range improvement. 1940's, the start of the Conservation Movement on the land by the operators, private and public. Soil Conservation Districts were formed and qualifying for engineering and technical supervision by the Soil Conservation Service (SCS). Grazing Districts were also eligible for this service. This, along with participating funds through the Agriculture Adjustment Act (AAA), a whole new pattern of land use was developing and extended on to rest-rotation systems of land use and improvement. 1969, County-Wide Soil Survey, this office initiated and working through the local Soil Conservation District and State SCS Office, obtained a project to accomplish such a survey. All land holding agencies and private land holders helped finance the project, with the major funding provided by SCS as well as the technology. It is a valuable tool in dealing with land management, and used by the CMR planning team in knowing what the soils are and what vegetation they will support. All of these factors have brought about great changes for good, including the ability to better sustain wildlife and domestic livestock both on and off the CMR.

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DEIS ALTERNATIVES PRESENTED

The DEIS presents 5 Alternative Management Proposals. It is hoped that through public input that the definitions and qualifying features can be changed to come up with a more acceptable plan than is featured in any one of the choices presented.

1. **Alternative A - No Action:** Of the choices presented, this organization and the majority of the local populace favor this proposal. However, as written and the connotation of title, NO ACTION, indicates a degradation of wildlife management which has not been the case. It is evident from the abundance of wildlife productivity of the CMR over the years and the present forage condition, that it was not by happenstance or non-wildlife management goals that this has occurred. It has been through a broad cooperative effort, prominent among the list are the people of the land, the ranchers involved.

(Some personal thoughts garnered over the years is that another resource, besides wildlife or natural resources, which must be considered is the human resource. The management of natural and renewable resources can best be accomplished to the extent of management of the human resource. The human resource in America is best managed by cooperation and education. In this case not the steadfast idealists, or those pressures from afar who know little of the situation. My old artillery Captain used to say "Everything depends on the situation and the terrain." It is my personal thought that a higher hill needs to be climbed in the writing of the final EIS for a broader view of the situation.)

o **Prairie Dog:** On page 7 of the DEIS (No Action) and in all the proposals, the prairie dog is mentioned in various rolls. Page 7 "No prairie dog or other small mammal control would occur on the refuge except for human health and safety purposes." This is one of the most contested of all species on the CMR. The people of this area are taught and practice good conservation methods. To review the present acreage inhabited and proposed expansion is incomprehensible to the people. The devastation of the land and forage where they locate is so complete in resource spoilage that it far over-shadows any of the benefits mentioned. This also places a cloud over the management techniques of the whole refuge.

o **Livestock AUMs** - It appears that under this proposal there would also be a large cut back in "livestock levels of approximately 33 percent below current federal AUM levels on the refuge" (page 10). Over these many years there have been grazing adjustments, changes of grazing systems and adapting through a greater knowledge of our resources on (and off) the CMR, to the benefit of the basic resources, which in turn has made the CMR one of the most productive of refuges in wildlife. At the same time continuing to be a part of the economic base through ranching. Cattle can be a benefit in reaching optimum vegetation conditions for wildlife. This should be done in a planned, long range program with the participation of the rancher and other interests. It will afford a continuity of operation for all and not an 'on again off again' program of uncertainty, at the sole direction of CMR management, which changes often. Although good individuals, most are not familiar with the ways of the prairie and its people (human resources). It was good to note the range site survey of individual livestock operators on the CMR, pages 181-183, average out 90% good to excellent condition.

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2. Alternative B (Proposed Action) - This seems to be the favored one by those presenting the DEIS. There are too many things to cover here to be compatible with good management.

o Coyote - Is the refuge just for wildlife alone or is man to have a roll in the harvest of excess.

o Rocky Mountain Big Horn & Bison - There needs to be more study and explanation before this consideration. The Big Horn has been tried, unsuccessfully as a sideline. See EXHIBIT III. (This was while I was a member of the Montana Fish and Game Commission.

o Fencing - This should be to a very minimum and then in relation to rest rotation pasturing plans or systems.

The other alternatives do not have a place. The description of multiple use is different than we know it and is self-disqualifying under this description.

There is a need for a resubmittal of a DEIS for consideration.

Response to Valley County Development Council

1. We appreciate the background history provided in your letter. It helps to gain an understanding of the present situation and viewpoints of the refuge.
2. Harvest through hunting is provided for in all the alternatives for game species.

The Wilderness Society

107 West Lawrence, Helena, Montana 59601 (406) 443-7350
Mail to: P.O. Box 1184

December 3, 1980

Mr. Wally Steucke, Area Manager
U. S. Fish and Wildlife Service
Federal Building, Room 3035
316 N. 26th Street
Billings, Montana 59101

Dear Mr. Steucke:

Please accept this letter as official comment from The Wilderness Society on the Draft Master Plan for the C. M. Russell National Wildlife Refuge. I first want to say that I am personally familiar with the CMR. You may recall last October when myself and other conservationists participated in a Fish and Wildlife Service sponsored tour of the west half of the Refuge. We took this tour with then newly appointed CMR Refuge Manager, Ralph Fries. We found the Refuge from the air, on the ground and by foot. We saw a wide variety of wildlife species and an incredible diversity of natural habitats ranging from the riparian zone to the rougher break country up to the flat bench land on both sides of Fort Peck Reservoir. Without question the CMR National Wildlife Refuge is a unique national resource of immense proportions. It is simply unequalled anywhere else in the world. It stretches for 125 miles through some of the finest wildlife habitat in the lower 48.

Of key significance is the fact that the CMR is a National Wildlife Refuge. The CMR is a wildlife refuge first and foremost despite the fact that many people seem to conveniently overlook this important fact.

The National Environmental Policy Act requires that Federal Environmental Statements provide to the public a reasonable range of alternatives. However, the CMR Master Plan fails to do this. Other than the preferred alternative, the Master Plan EIS includes four other possibilities, all of which are basically nonalternatives. The no-action alternative is not a real choice in that most everyone recognizes the need for affirmative management to protect the wildlife resources on the CMR. The so-called multiple use alternative is not even a legal option for a National Wildlife Refuge. The no grazing alternative is, of course, a political impossibility. Further, we would oppose a complete elimination of grazing on the CMR because we believe that well managed grazing and protection of wildlife resources are mutually beneficial and compatible.

Finally, the intensive wildlife alternative involves far too much heavy handed manipulation of the natural environment including plowing, spraying and dam building all at prohibitive cost with serious damage to the environment, so that this too is an unreasonable option.

"In wildness is the preservation of the world." - Thoreau

Mr. Wally Steucke
December 3, 1980
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The Wilderness Society generally supports the basic thrust of the preferred alternative calling for grazing reductions that would average 33 percent. However, we cannot tell from reading the plan how these precise cuts were derived. Therefore, we have no basis of knowing whether the reductions are too large or too small. I discussed this with Ralph Fries at a meeting in Miles City on October 15th and he replied that the Fish and Wildlife Service has ample documentation to back up the proposed grazing reductions. I certainly hope so, because we are not given this important information in the Master Plan.

We recognize that livestock is by far the most significant issue dealt with in the Master Plan. The statement itself makes it abundantly clear that conditions for wildlife on the CMR are far from optimal because of grazing-induced resource problems.

As eluded to above, the Master Plan tends to direct the reader toward the preferred alternative by presenting other alternatives which are simply unrealistic. The Master Plan violates the NEPA requirement for presentation of the full range of viable alternatives. Therefore, The Wilderness Society strongly urges that the Fish and Wildlife Service develop another alternative. One that considers livestock grazing as a management tool that would be used on a prescriptive basis to achieve appropriate habitat conditions for wildlife. Grazing would have to be applied carefully and very selectively if it is to be successfully employed to improve wildlife habitat. This alternative must include site-specific objectives for each habitat type based on specifically identified wildlife needs. Grazing would be used as one tool to modify vegetative habitat. The season of use, stocking rates, levels of utilization and other grazing parameters should then be tailored to meet the objectives of each habitat type. This approach would avoid the problem of grazing being spread indiscriminately across different habitat types without careful selectivity.

When Ralph and I toured the CMR last year, he and I engaged in many hours of philosophical discussion about natural management versus manipulation. I want to reemphasize my strong support for natural systems management on the CMR. Unfortunately, the preferred alternative in the CMR Master Plan proposes ripping as much as 10,000 acres of the Refuge in order to supposedly improve vegetative productivity for wildlife. We feel strongly that this action would conflict directly with the mission of the CMR which is to provide optimal wildlife populations in a generally natural setting. I feel very strongly that wildlife does not need plowing, spraying and fences to survive. We urge that the Fish and Wildlife Service manage the CMR for its natural values allowing natural processes to operate for the benefit of wildlife and that the Service make every effort over time to remove human intrusions to the maximum extent possible.

During our tour last year, we observed areas near Slippery Ann where farming has taken place along the Missouri River Bottom. We strongly support the Fish and Wildlife Service Plan to phase out farming operations along the Missouri River Bottom as we believe that this will benefit wildlife and allow a more natural form of management for indigenous wildlife species.

The Fish and Wildlife Service is to be commended for its proposal to reintroduce Bighorn Sheep, Blackfooted Ferret, Swift Foxes and Peregrine Falcons. This is some of the most exciting wildlife news received in Montana in a long time and I

Mr. Wally Stuecke
December 3, 1980
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want you to know of our complete, enthusiastic, wholehearted support for the plans to reintroduce these species.


I note that the Fish and Wildlife Service recommends that cabinsites be retained on the Refuge. From a strict conservation standpoint, recreational homesites on a National Wildlife Refuge are inappropriate. They may even conflict directly with wildlife, although, I admit that this would be hard to prove. On the other hand, The Wilderness Society appreciates the importance of this form of recreation in the Glasgow/Fort Peck area as well as the scarcity of comparable recreational opportunities in northeastern Montana. Although we might prefer that these cabinsites be phased out, we do not make this recommendation. We do ask, however, that no new cabinsites be permitted on the Refuge and that the line be held where it is, insofar as recreational cabinsites are concerned.

Predator control has long been an extremely controversial issue on the Refuge. I recall only too well the controversy concerning plans to shoot coyotes on the ice during the winter time in years past. I note that the Fish and Wildlife Service has basically avoided the issue of predator control in the Management Plan. I believe that since we are dealing with a National Wildlife Refuge, predator control should take place in a very selective manner, in cases such as when endangered wildlife species need protection. In either event, predators should not be routinely killed simply to protect livestock but should rather be carefully controlled based on the overriding needs of wildlife.

In closing, I would like to cite the final recommendations on the management of the National Wildlife Refuge System, dated 1970. In this policy, the Fish and Wildlife Service states that grazing is permitted on National Wildlife Refuges as long as it's "employed for the benefit of and is not harmful to wildlife and wildlife habitat". I believe that this is an excellent farsighted policy and we commend the Fish and Wildlife Service for adopting it. We urge the Service to adhere to it insofar as the CMR Management Plan is concerned.

Completion of this Management Plan is only the first step toward a long process of proper planning and protection of the publically owned resources of the CMR. The implementation of this plan will require sensitivity to the needs and concerns of the local, state and national constituencies as well as a true sensitivity to the needs of wildlife. This will require a careful balancing process in the years to come. The Wilderness Society stands ready in every way possible to assist the Fish and Wildlife Service to implement a viable CMR Master Plan.

I have appreciated this opportunity to review the draft plan and I look forward to receiving the final. Please let me know if we can be of further assistance.

Sincerely,

Bill Cunningham
Regional Representative

cc: Governor Elect Ted Schwinden
Senator John Melcher
Senator Max Baucus
Representative Ron Marlenee

Response to the Wilderness Society

1. Please see responses to Defenders of Wildlife.

WOLF POINT CHAMBER OF COMMERCE & AGRICULTURE

SHOPPING CENTER OF NORTHEAST MONTANA
BOX 227
WOLF POINT, MONTANA 59201

October 30, 1980

Ervin W. Stuecke, Area Manager
Fish and Wildlife Service
Federal Building, Room 3035
316 North 26th Street
Billings, Montana 59101

Dear Sir,


The Wolf Point Chamber of Commerce & Agriculture vehemently protest the move by the Fish and Wildlife Service to put all of the area around the Fort Peck Dam into a "WILDERNESS AREA", which is to eliminate all of the cabins and recreational areas around the lake & a high fence is then to be erected to separate the public from this area.

The Rock Creek State Park area, The Pines, and all of the park areas around the Fort Peck Dam are very important recreational areas in Northeast Montana. They certainly are very important to Wolf Point and our surrounding area.

The Fort Peck Dam cannot be classified a natural dam, since it is a man made dam. All of the terrain has been adapted to the dam and so it is very difficult to see how this can be classified as a Wilderness Area that has maintained its original state.

We believe that it is wrong to take land out of production that has a value to produce.

There may be some areas around the Fort Peck Dam that would be suitable for a Wilderness Area but certainly not all of it. There should be considerable study from the people of this area whom this will affect, before any decision is made to make any part a Wilderness Area.

Submitted by
Wolf Point Chamber of Commerce & Agriculture

L. M. "Skip" Clayton III
President

"Home of World Famous Wild Horse Stampede"

Response to Wolf Point Chamber of Commerce and Agriculture

1. The refuge was studied for wilderness suitability in 1974, as directed by the Wilderness Act of 1964. The result of this investigation is now before Congress in the form of a proposal for wilderness designation of 161,460 acres contained in 15 parcels. Thus, the wilderness designation decision will be made by Congress sometime in the future, after it considers the 1974 study. The DEIS has no bearing on the wilderness designation.

Neither the 1974 wilderness study nor the Proposed Action in the DEIS contain any proposal for a high fence around the refuge boundary or a proposal to eliminate the cabins or recreational areas within the refuge.

COMMENTS ON THE MANAGEMENT OF
CHARLES M. RUSSELL NATIONAL WILDLIFE REFUGE
DRAFT ENVIRONMENTAL IMPACT STATEMENT

by George B. Chaffee, Resource Consultant
PO Box 361, Clancy, MT 59634

The following comments are submitted in response to certain aspects of the CMR-EIS as they pertain to alternative actions. After reviewing each of the proposed actions and in view of the CMR goals and objectives, it seems apparent this document is ambiguous relative to tangible approaches in achieving wildlife betterment by natural management and manipulation of vegetation within the various ecosystems in the CMR Refuge.

This evaluation of the EIS is addressed primarily to the following components mentioned in the CMR draft report. These include the following:

Range Objectives,
Habitat Management,
Endangered or Unique Species Introduction,
Forage Allocation, and
Natural Management vs. Manipulation.

Range Objectives

The 1979 contract range survey clearly illustrates that a vast majority (92%) of the rangeland in the CMR is in good to excellent condition. It is well documented that wildlife forage and habitat benefit from good to excellent range condition that was achieved by management (proper use, deferred rotation and/or rest-rotation). Areas in less than satisfactory condition need to be under prescribed treatment based on the physiological requirements of the key forage plants (herbaceous and browse).

2

Under Alternative B (Proposed Action) the proposal to reduce grazing 33% by 1985 and then implement by seasonal or continuous grazing at light stocking levels is counter productive in achieving habitat improvement and forage production. The intensity of use on unsatisfactory ranges would only differ by degree under continuous or light use. Intensive grazing systems, such as rest or deferred rotation grazing, could achieve the goal of habitat improvement and increased forage production. Mapping of unsuitable range sites with severe soil hazards and limitations and certain sensitive river bottom sites (river wash and beach sands) is a means of adjusting AUMs to wildlife and domestic livestock.

With a majority of the CMR refuge in good to excellent condition, the FWS is in an ideal position to achieve habitat improvement and forage production increases in a reasonable time frame by intensive grazing system implementation.

The proposed action (Alternative B) is predicated upon initial livestock reduction and habitat improvement through cultural practices (i.e., burning, ripping, planting, etc.). This proposal is ecologically unsound without first monitoring an allotment area for several years under a prescribed grazing system in order to more accurately determine the suitable cultural tool (burn, spray, or reseed) to achieve the wildlife habitat goal.

Light stocking and/or continuous grazing as a prescription for range and habitat improvement is not the answer. Primary use (or key areas) will still endure overuse under this proposal.

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Later season or winter grazing use can achieve improvement, but may not encourage the succession of the desired browse species. Livestock grazing under management with adherence to the physiological requirements of the key plant species (plant growth and regrowth) should be the vehicle upon which to achieve improved habitat condition and forage production.

Habitat Management

This aspect of achieving habitat improvement and increased forage production goals has merit, if intensive grazing systems are implemented with the required pasture fencing, water development, and a limited amount of prescribed burning and some ripping. Extensive boundary fencing would serve no useful purpose in achieving habitat betterment unless management boundaries of range site and condition serve as the fence lines. Moreover, ecosystem boundaries (refuge and outside areas) would be severed by boundary fencing resulting in overconcentrations of wildlife and livestock use on fence lines, coulees, bottoms or riparian areas.

Ripping and planting are recognized as good management tools on limited areas and with fenced protection. River bottom areas and abandoned cultivated lands would benefit from these practices rather than to extensively rip and plant upland areas where grazing management can achieve the same goal at less risk to erosion and more economically obtainable. In planting, monoculture would displace native vegetative diversity which is essential for higher biotic potential. The success of planting deciduous shrubs in the severe climatic conditions of CMR is not documented as high.

2

4

Overall, a cooperative approach to habitat management is imperative between the FWS, BLM, NDFWAF, and state and private lands. Except for certain river and reservoir bottom lands, a majority of the ecosystems within CMR are portions of ecosystems extending to adjacent ownerships. When Fort Peck Reservoir was flooded in the 1940s the major river ecosystem was destroyed, which impacted all wildlife species dependent upon the deciduous riparian and mesic herbaceous vegetation in sustaining biotic community life. Dependence on portions of the river not inundated by the reservoir is higher than ever today - this means a cooperative land use planning approach - NOT a mono-management and preservation approach. The conglomeration of rangeland, pastures, cropland, deciduous cover and conifer types now provide the food, cover and security for all wildlife and domestic livestock thriving within each ecosystem.

Endangered or Unique Species Introduction

This action listed under Alternative B as a tool to reinstate historical occurrence of species such as bighorn sheep, buffalo, ferrets and fox is an experimental approach with a potentially low benefit.

The failure of the Billy Creek bighorn sheep transplant tells the story. Why repeat the transplanting of wildlife species in light of several previous failures on the CMR?

Conversely, transplant elk are now prolific and adapting well in their new environment in the CMR. They feed on private, state and BLM ranges and will continue to expand their use and

occupation of other ownerships within similar seasonal ranges. How do we mitigate these impacts on areas outside the CMR?

In short, this action should be considered only on a very limited scale, not as indicated in the proposed action.

Once again Alternative A - No action is the best alternative for the benefit of existing and potential habitat for wildlife.

Forage Allocation

Proper use factors for domestic livestock and wildlife have been a subject of confusion and uncertainty in the CMR. On the basis of the 1979 range survey results there is no justification for a 33% reduction in livestock grazing by 1985. Existing livestock numbers on ranges in good and excellent condition need not be reduced to provide more forage for wildlife, if proper use criteria are used. Those ranges in fair and poor condition need to be implemented with prescribed treatment at initial stocking rates at proper use levels on key forage species to sustain yearlong wildlife use. Forage allocation then should be made on the basis of existing and potential forage production expected under intensive management. There is sufficient evidence of the success of rest-rotation grazing, for example in the Missouri Breaks region, to believe that domestic livestock should be maintained at capacities in line with actual use/proper use data on implemented pastures.

Overall there is a lack of supportive data and information to advocate the Proposed Action (Alternative B). There seems to be only one sound decision - No Action (Alternative A).

Response to Mr. George B. Chaffee

1. Range conditions and wildlife habitat are not the same and should not be used synonymously. Range condition measures such parameters as species composition and projection and does not address important wildlife habitat components such as residual cover, vegetative interspersation, and diversity, nor does it attach sufficient importance to key wildlife shrub communities.

Because habitat is recognized as the key to wildlife abundance, this document emphasizes habitat quality and quantity.

2. There are presently six rest-rotation and two deferred grazing systems in operation on CMR. None of these systems have been shown to be significantly better for wildlife abundance and diversity than light seasonal grazing with a favorable season of use. Furthermore, intensive systems are a much more expensive alternative and detract more from naturalness than the type of grazing generally suggested in the Proposed Action. However, wildlife and habitat objectives will determine the type of grazing on a specific area.

The FWS feels that to first set up intensive grazing systems, then monitor response to determine what needs to be manipulated, would be unnecessarily expensive and would place wildlife in a secondary role. This is contrary to the enabling legislation for the area and against the policies of the FWS.

The FWS agrees with the statement that "adherence to the physiological requirements of the key plant species" is essential to manipulate habitats. However, vegetative requirements and wildlife population objectives have to both be considered in refuge management. Intensive grazing systems rarely can be operated with these constraints in mind.

3. See responses #1 and 2 above.

COMMENT ON THE C.M. RUSSELL DRAFT ENVIRONMENTAL IMPACT STATEMENT
BY MARTIN R. CONNELL, D.V.M., FORT PECK ROUTE, GLASGOW, MONTANA
OCTOBER 30, 1980

OPENING COMMENT:

I find the environmental impact statement totally inadequate in dealing with the economic changes that would occur in the local business community if any of the alternatives except "no action" were approved. It is beyond my comprehension that an environmental impact statement can neglect such an important area as the effect on the small communities. Our last census shows that the small communities are already an endangered species. It was my understanding that the CMR was to protect endangered species.

All citizens of the affected counties and the entire State of Montana should be aware of this proposal by the CMR. They have cleverly put in a "no action alternative", which is the carrot on the end of the stick. There is no serious consideration of "No Action".

I submit that this EIS is not a format of alternatives but a Stepped Down Livestock & Recreation Reduction Plan that when instituted will totally eliminate grazing, hunting, recreation, and cabin sites on the lake.

This country has an energy shortage and every available resource must be used to stop our energy dependence upon the Arab world; yet, under this plan it would be impossible to tap any of the energy sources that lie within the range. This statement says to

me that we want to live in the 1980's and 1990's like we did in the 1800's but we still want a flush toilet in the house. I feel any proposal should not stop exploration for valuable minerals. I realize that legislation may be necessary to make this change.

REVIEW OF THE REPORT:

I would like to dwell on some of the highlights that I found in reviewing this report.

Page IX - The summary states: "No threatened species of animals are known to occur on the refuge. Endangered wildlife species include peregrine falcons, bald eagles and possibly black-footed ferrets. Wildlife habitat on the refuge is only in fair condition". I have consulted biologists and range specialists regarding this situation, and I am told that there is serious doubt that removal of cattle from the CMR would increase the quality of the wildlife habitat. Further discussions revealed that if there are any black-footed ferrets they have been brought in by the Fish & Wildlife. The bald eagle and peregrine falcon populations would not increase if the CMR left the range alone. The only way that their numbers would increase is if the CMR people brought more in. The report further states on this page that "Grazing, and haying activities on the refuge, although limited, contribute to the economy". Is it not important in Eastern Montana to have contribution to the economy?

Page X - The summary states, under Proposed Action Alternative, "Significant management actions would include reduction in livestock grazing as well as changing existing seasons of use and modifying existing grazing systems to benefit wildlife". I do not know how

naive the managers of the CMR range are regarding Eastern Montana cattle operations; but one must realize that the grazing season in this area is limited. Even a bureaucrat would have a hard time planning a different grazing season dealing with the logistics of our winters and weather.

"Farming along the Missouri River would be phased out but some lure crop farming could be implemented to decrease elk deprivation on private lands". In recent discussions at Montana State University with individuals who have worked with the elk herd in Yellowstone Park and other areas, they state that it will be impossible to keep the elk off private land.

The EIS states, "Federal Livestock AUM's would eventually be reduced 33 percent below present levels. Some inholdings would be acquired and ownership of all lands within CMR would be ascertained." Does this mean that they are going to condemn private lands? What has happened to the right of an individual in this country when the government can take away private lands? Something the CMR and government bureaucrats tend to forget is that generations ago many of these lands were settled by pioneers. They worked hard to develop the land and they have passed it down from generation to generation. Along came Fort Peck Lake and flooded the best farm land in Eastern Montana. These people were pushed up on the shore and then along came the CMR and now threatens to push them out entirely. I believe that this is wrong!

In a discussion with a member of the CMR staff he revealed that under the "Proposed Action Alternative" they would control the hunting by controlling the access. They do not want any hunting permitted on

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the CMR.

Page XI - "Spawning habitat for fish would be developed on the reservoir". Talking with experts on the problems of spawning fish in Fort Peck Reservoir, they state that the biggest problem to spawning is the fluctuation in the level of the Fort Peck Lake. Does that mean that the CMR is going to take over control from the Corps of Engineers on the water level? They hope to spawn Northern Pike and forget the problems of floods with their water control plan.

This EIS statement implies that there will be no control of fires. I can envision, as has happened in the past, that local ranchers will be charged with trespassing for trying to control a fire on CMR ground that threatens to burn their private land. They would lead us to believe that they will stand and watch the fire burn until it reaches the private land and then they will put it out. This sounds good on paper; but obviously they have not fought many fires.

They further state in this alternative that private cabins would be eliminated and areas returned to wildlife habitat. More primitive fishing access sites would be provided and they would replace some existing high and low density recreation areas. That means that the sites would be inaccessible.

Under the "Multiple Use Alternative" it says "Wildlife values would be equal to livestock as would recreation". Let us not be naive ... the CMR would be the one determining what is equal not you and I. I do not like the loose wording that says: "Livestock would receive approximately one-half the allocated forage". That should be spelled out in advance. It also states under this alternative that "Private cabins would remain as they are", does that mean there would be no

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improvements and that there would be no further cabins?

Under "No Grazing Alternative" "All private and state inholdings would have to be acquired before elimination of livestock grazing could occur since most of these areas are unfenced and stocked by the the operators at carrying capacity levels". My questions is how do they plan to do this? The only way that I can see that they could obtain such land would be by condemnation. One thing they forget to say after stating that "All livestock grazing would be eliminated by the year 2000. The entire refuge boundary would be fenced where possible". By the year 2001 the economic chaos created in the out-lying areas would eventually eliminate man from the CMR.

I feel that at this point that they should add a 6th alternative called "All Livestock Grazing and Recreation and No Wildlife or Bureaucrats". It would take legislation to eliminate the CMR.

Page 1 - The EIS states "Many wildlife-livestock problems at the Charles M. Russell National Wildlife Refuge have resulted from conflicting management and legislation". The conflicting management was when the CMR was given authority over grazing and the conflicting legislation was Public Law making the Fish & Wildlife Service sole administrator of the Wildlife Refuge. Who has caused the problem? The Corps of Engineers hasn't caused the problem, nor has the hunter/fisherman, nor has the recreationist, nor has the rancher. It appears to me that all the problems have been caused by CMR attitudes and employees.

Page 5 - Under "Wildlife Objectives" CMR proposes to introduce the endangered species. I believe that it must be made perfectly clear to everyone involved that by allowing the CMR to introduce endangered species to the game range we effectively commit hari-kari! The entire CMR range

-5-

and surrounding area, state and BLM land, will immediately come under the guidelines of the "Endangered Species Act". This would be disastrous to all forms of recreation, hunting, livestock grazing, and make the present CMR problems sound like a tea party.

Page 12 - The statement that really tickles me is on page 12 where they state "Coyote control to benefit other wildlife species would occur as a last resort". If they are going to let nature take the course then why don't they let nature control the coyotes. The rancher has been portrayed as a vicious villain for trying to control the coyote that kills his sheep and cattle. Now the nature boys tell us they can't run a CMR wildlife refuge without controlling the coyotes...that's interesting. Will they get 10-80 to do it?

Under "Forage Allocation" they state "Livestock grazing on CMR would be substantially reduced to improve habitat conditions for wildlife". At this point it is my strong feeling that independent experts from all phases of livestock grazing, biology, and wildlife management need to be brought together to answer the question if improvement would occur. In visiting with three different individuals on the subject I have consistently received the same answer; the removal of livestock would in all likelihood do very little to improve the wildlife habitat for the entire range. This is especially true on the CMR since such a small part of the range is used for cattle grazing, due to inaccessible terrain, low rain fall, and soil types.

Pages 14-16 - Throughout this report I find a consistent attempt to lure the hunter, historian, fisherman, and recreationist into a sense of well being by statements that say "All existing roads and trails

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including those that have been closed would be evaluated to determine those that should be improved, realigned or closed". The last hearing angered the hunter, historian, and recreationist causing them to side with the stockman. It is my belief that now they are putting sugar lumps in the package to lure them from the cattlemen's side so they will not object to this program. They go on to state "An additional boat launching, camping, and fishing access site would be developed", "Wildlife populations would be harvested", and "Qualified cultural structures and sites would be officially designated". To concerned citizens, "Harvested" could mean taking animals and putting them in another game range; not necessarily hunting.

These are things put into this EIS so that they will appeal to all of the Easterner's who have long since destroyed much of their heritage.

Page 21 - Under "Multiple Use" the opening statement is "This alternative would not be possible to implement unless Congressional action changed CMR from a national wildlife refuge to a multiple use management area". I believe that strong consideration should be given to legislative changes which would solve our problem. In dealing with the CMR people, I believe that it has become obvious to all that the best interests of Eastern Montana are not being considered by the CMR.

Page 24 - Under "Alternative E (No Grazing)" the intention is to eliminate all livestock, all hunting, all fishing, and all public access and don't you believe for one moment that the CMR people will be swayed from their ultimate goal.

Page 27 - They say "Private land closures to public use, already a problem in the area, could be expected to accelerate, further jeopardizing farmer/recreationist/state/federal relations". I have

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practiced veterinary medicine in Eastern Montana for 15 years and it appears to me that the only problem that has ever occurred with these relationships are continual harassment by the bureaucrats driving their vehicles all over the land, building fences, and trespassing on ranches. Very few recreationists and hunters have violated fences and land of the farmer/rancher. Most hunting relationships in Eastern Montana are excellent. If you don't believe me, go to the western part of the state and other states where lands are totally closed. When we had the Air Base there was excessive hunting pressure that caused problems, but I believe beyond any shadow of doubt that the relationship between the hunter and the rancher will continue to improve without the government's interference.

Page 30 - Says "These figures indicate that regional effects due to grazing changes on CMR would be insignificant under any of the alternatives. Primarily, effects of grazing changes would be felt by permittees who use refuge lands". This is nonsense. The economic effects will be severe and especially to the related businesses in towns and the people who depend on these cattle for a livelihood. They must be like the ostrich with their head in the sand. They have no idea what is going on and I will not waste my time going through the many allied services and businesses that depend upon livestock grazing.

Page 31 - They state that Franklin D. Roosevelt, under Executive Order number 7509, in 1936 started the Fort Peck Game Range. Since that time we have suffered extremely. I think it is time that this group band together and bring about a dissolution of the CMR range.

Page 44 - There is a comment that "Adjacent landowners' and grazing permittees' attitudes are negative toward this expansion and poaching

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and illegal shooting could limit further extension of their range". This statement is made regarding the elk. The CMR totally disregards the rights of the permittees and adjacent landowners. They introduce the elk, then increase the size of the herd and push it to the limit. What do they expect landowners to do? They work to put up crops only to see them destroyed by the elk. What would a comparable CMR man and his wife do if their secure dwelling within the city limits was threatened by neighbors putting sheep in their back yard and once the neighbors grass was gone the sheep headed over to the bureaucrats yard?

Page 50 - It states "No endangered or threatened species of plants are known to occur on CMR". Why should any be introduced? If God had wanted it to be there surely in His infinite wisdom He would have seen that they were growing.

Page 103 - It states "Elimination of livestock grazing from the refuge could financially ruin many small, family-owned ranching operations which depend primarily upon refuge lands. Those livestock operators suffering high negative impacts in Appendix 10 would probably be forced out of business". I thought our constitution guaranteed every individual the right to the fruits of his efforts.

I seriously doubt the constitutionality of a proposal that would financially destroy generations of family owned ranches. The CMR bureaucrats admit that destruction is their plan and the tax payer will pay the bill.

It is the time for all in Eastern Montana to band together and fight a battle against the CMR to the bitter end.

-9-

SUMMARY:

The Draft Environmental Impact Statement prepared by the CMR staff is incomplete because of the omission of the economic effect on local communities and businesses.

It is not a plan with five alternatives for action; but rather a plan to be implemented in five phases with the ultimate goal being elimination of all livestock grazing, hunting, fishing, and recreation. This includes the condemnation of private and state lands within the game range and removal of all cabin sites.

The CMR bureaucrats intend to accomplish this take over by the introduction of endangered species; thereby bringing the entire area under the Endangered Species Act. The statement admits that "many small family owned ranching operations would be financially ruined".

SOLUTIONS:

A unified approach by all affected parties banding together into a cohesive group to stop the CMR take-over plan.

This group would be faced with intense negotiations with the CMR people to reach an acceptable alternative.

Simultaneously task forces will develop specific legislation to stop or eradicate the CMR.

CHALLENGE TO THE CMR BUREAUCRATS

I Predict:

That if you persist in driving the livestockman, hunters, fisherman, and recreationist from the game range;

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That if you condemn the private lands and drive generations of families from their homes;

A rebellion of destruction of game and burning of forage will ravage the land. Once the Eastern Montanan realizes that it is the politicians from the big cities that prevent him from determining his own destiny, the frustration and despair will drive the landowner in a desperate last stand to rid his land of the "CMR Pestilence".

Respectfully submitted,


Martin R. Connell, D.V.M.

*All comments and quotations are taken from the Draft Environmental Impact Statement by the CMR, dated August 1980.

Response to Dr. Martin R. Connell

1. The entire economic situation has been reevaluated, and the text has been revised appropriately.
2. An extensive review of the wildlife habitat under HEP (see Appendix 2) indicated that grazing is probably the major limiting factor on wildlife habitat at CMR.
3. Minor changes in season of use can frequently have major changes in livestock-wildlife competition.
4. The FWS does not propose to keep elk off private land, but lure cropping is one of several alternatives being considered to alleviate or minimize crop depredations on neighboring ranches in late summer.
5. The policy of the FWS is to acquire only lands needed to reach the goals of the refuge. When these parcels are identified for acquisition, a willing seller basis will be used. Although the FWS has the authority to acquire lands by condemnation under very special circumstances, this authority is seldom used and is not planned for CMR.
6. The FWS has no intention of limiting access nor of limiting hunting on CMR.
7. The FWS will cooperate with the Corps of Engineers and the Montana Department of Fish, Wildlife, and Parks so that Fort Peck Reservoir is managed in the best manner for the fishery resources that will comply with the primary mandates of the Fort Peck project.
8. Wildfire will be managed and controlled in accordance with the refuge fire management plan.
9. The FWS does not propose the elimination of cabin sites.
10. The Endangered Species Act does not preclude hunting, fishing, or any other form of recreation, nor does it preclude livestock grazing when these activities do not jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of their critical habitat (Endangered Species Act of 1973 as amended Sec. 7(a)).
11. The FWS proposes hunting (i.e. harvesting) not transplanting.
12. Alternative F does not indicate nor include the elimination of public access.

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13. Please see response #1 above.
14. The FWS does not indicate nor plan to introduce any endangered or threatened plants to CMR.
15. Please see response #1 above.
16. Please reread the EIS; your comprehension of the document is in error.

Route 1, Box 168C
Worland, Wyo. 82401
November 27, 1980

Erwin W. Steuske, Area Manager
Fish and Wildlife Service
Federal Building Room 3085
316N 26th Street
Billings, Montana 59101

Subject: CMRNWR
Draft EIS Comments

Dear Sir:

Please consider these comments for your final Environmental Impact Statement for Management of Charles M. Russell National Wildlife Refuge.

My preference in alternatives would be a compromise between no grazing (E) and wildlife management alternative (C). Critical wildlife areas and heavy depredation areas should be purposely purchased. Also, the need for some form of prescribed livestock grazing is a real one; however, 30,000 AUM's appears a bit heavy on an annual basis. Some proportion of that prescribed grazing need can surely be accomplished by wildlife population and distribution management. Wildlife prescribed grazing should be favored over livestock. A 50% reduction in grazing allows for more than just prescribed livestock grazing treatments on in some areas already severely overused ranges.

②

To remain in the spirit of a "Wildlife Refuge", wildlife should take precedence over all other resource values and attain its ecological maximum dynamic equilibrium. Granted that man made boundaries are not ecological boundaries, the CMR with boundary fencing, expansion, and elimination of most livestock has the potential to become reseeded a prairie - river breaks pasture ecosystem unequalled anywhere in North America.

The fact that most livestock operators in the area are poverty level operations, that can hardly be called stable economic units, should be evidence that grazing cuts and the following advent of larger, fewer, but more economical ranch units would benefit the livestock industry stability in the area.

Also several items appear vague and misleading.

Page 5 Wildlife Objective 9)

- What is the proposed acreage so one has an idea of population goals.
- Where is an appendix backup for a 2.5 cell pop. ni population level.
- Does this population level reflect improved range condition levels by 2000.
- Confusing and closely associated grasslands

③

is vague. What is closely associated in on-the-ground terms. This in itself does not fully represent the total potential habitat of elk in the CMR/NWR. Increased riparian restoration and potential of the deciduous woodlands need to be included.

I find no objectives addressing special requirements for sage grouse.

I feel the fact of using wildlife to obtain some of the wildlife goals has been ignored in preference to livestock prescribed grazing. No examples of where and how and the objective of such prescribed grazing are noted than could not be fulfilled by bison for example. The National Bison Range at Mone, Mont., although on a small scale indicate such is a very real possibility. Also overpopulation of elk periodically can effect habitat changes.

I feel a better identification of habitat acreages and population levels goals for bighorn sheep needs clarifying and the roles, stress impacts, and predator-prey relationships resultant of ADC programs needs better analysis. Thank you for your time and effort
Jeff Denton

Response to Mr. Jeff Denton

- The FWS feels that approximately 545,000 acres of elk habitat are present on CMR.
 - Backup material is beyond the scope of the document and is available in the files at the refuge headquarters in Lewis-town, Montana.
 - Yes, this population level would reflect improved range condition levels by the year 2005.
 - Closely associated grassland communities refers to those communities that are located adjacent to forested types. Many times these communities are intermingled on the refuge. The FWS agrees that not all elk habitat is included in these categories. Riparian woodland habitat is an important community for elk also.
- Many wildlife species inhabit CMR, and it is not feasible to establish specific objectives in the text for each species. Please see goals 1 and 4.
- FWS experience has shown that bison management by the Federal government is both difficult and expensive; therefore, use of bison to manipulate vegetation was not selected for the Proposed Action. The FWS will work with any permittee desiring to replace livestock with bison.
- Bighorn sheep habitat on CMR is not well understood. Should bighorn sheep become established on CMR, suitable habitat types and population goals will be established in cooperation with the Montana Department of Fish, Wildlife, and Parks.
- Predator control has been adequately addressed in two previous FWS EIS's: Mammalian Predator Damage Management for Livestock Production in the Western U.S., and Operation of the National Wildlife Refuge System.

5503 N. Cannon
Spokane, WA 99208

Erwin W. Steucke, Area Manager
Fish and Wildlife Service
Federal Building, Rm 3085
Billings, Montana 59101

Dear Mr. Steucke:

Alternative B in the draft of Charles M. Russell range impact statement is the only feasible management alternative listed. My comments will pertain to the "Summary" and Alternative B.

In the Summary
Wildlife habitat conditions are stated as "only fair". The charts on pages 80, 88, 96 and 102 show habitat for sharp-tail grouse and waterfowl are the only species listed in fair. Habitat conditions for pronghorn, Elk and deer are listed as good. More sagebrush would be available for grouse if livestock were allowed to overgraze grasslands now listed in good and excellent condition--ecologically.

Private cabin leases are a negative to most wildlife species. AUM values are \$10 to \$15 per each on private rangeland in Washington State. The rate should be adjusted from present extremely low of \$1.89 to somewhere near the market value. There is no evidence that a 33 percent cut in livestock numbers is needed. The range is 92 percent good and excellent condition. The fair and poor ranges are partially prairie dog and "homesteader" tillage caused, and these areas, particularly the silver sage covered flats, are very important to wintering deer and antelope, also grouse.

I believe that climate is the most obvious reason for wildlife limitations--not cows! Hunting (both legal and illegal) is undoubtedly inhibiting game types also. Perhaps no-hunting instead of reduced livestock would be more effective. The CMR is a Wildlife Refuge not a hunting reserve.

Alternative B

It is quite obvious in this section that thorough coordinated planning is needed with each agency responsible for land management, livestock permittees, sportsmen, nature lovers and others involved. A coordinated range resource management plan with its alternatives and long range objectives (also short range) spelled out.

The group needs to understand the base range resource and that wildlife must be first in perspective of all users. Problems of wildlife must be pinpointed on the land with the coordinated planning group to gain everyone's understanding and support.

The coordinated planning approach used with ranchers, state and federal agencies, sportsmen, timber industry people and others in the states of Montana, Washington and Oregon would be very helpful. Conservation Districts serve as a catalyst for this planning effort. Soil Conservation Service in Bozeman, Montana, Spokane, Washington, or Portland, Oregon will gladly give you more information on coordinated resource planning and about its results.

Burning native rangeland to improve stands of sagebrush is not successful. Burning will kill big sagebrush. Rabbitbrushes usually increase following a fire. Burning is dangerous. I personally lost one fire by whirlwinds—I have known of rabbits spreading fires outside the area to be burned. Burning takes land cover all off for a few years. This cover is badly needed to hold snow from blowing and protect soil from eroding. Some burning might be needed in dense timber areas but I doubt the benefits will exceed damages.

There are other minor contradictory statements and lack of clarity which a good editing will correct.

Roads and fences are costly to maintain and are negative to wildlife. These should be kept to a minimum. They can be replaced to some extent by more use of saddle horses, boats, barges and aircraft.

Thanks for the opportunity to comment.

Sincerely yours,

Claude C. Dillon
Claude C. Dillon
Range Consultant

P.S. I made a statement at the Missoula meeting you may want to review.

cc: Senator Max Baucus, Washington, D.C.
Hank Fischer, Montana Rep., Missoula, Mont.
Dennis Phillippi, SCS, Bozeman, Mont.
Robert L. Ross, Bozeman, Mont.
Peter V. Jackson, Harrison, Mont.

Response to Mr. Claude C. Dillon

1. The FWS manages CMR for diversity both in habitat and species.
2. FWS believes the evidence is overwhelming throughout the EIS that there is a need to reduce livestock AUMs to improve wildlife habitat.
3. Please see paragraph 5, page 11, for fire management in the Proposed Action. Past wildfires on CMR have resulted in excellent shrub communities on many sites; there is no reason to believe prescribed burns would not accomplish the same. Rubber rabbitbrush is heavily browsed by wildlife on CMR.

1780 Arlington Drive
Missoula, Montana 59801
November 30, 1980

Erwin W. Steucke, Area Manager
Fish and Wildlife Service
Federal Building, Room 3085
Billings, Montana 59101

Dear Sir,

We are responding to the draft environmental impact statement on the management of the Charles M. Russell National Wildlife Refuge. We support the issuance of an impact statement and your efforts to do so. It will provide and does general and much needed direction for managing the use of the resources on the refuge.

In general, we favor Alternative B (Proposed Action). However, in the final draft we would like the following direction added to Alternative B:

- 1 - Stocking rates calculated for domestic livestock are consistent with wildlife objectives and will either improve or have no negative impacts on wildlife species or their habitat.
- 2 - Direction should be provided to improve the cover-forage ratios for all wildlife species.
- 3 - A pond development program should be initiated and sustained to provide water for wildlife in areas where water is limited and/or in short supply during critical periods. Cover and forage should be protected in the area immediately adjacent to these developments.
- 4 - A program should be initiated immediately to protect and improve wildlife habitat in all riparian zones.
- 5 - Peregrine falcons, black-footed ferrets, swift fox, bighorn sheep and buffalo should be reintroduced. Number of species to be reintroduced should be tied to the carrying capacity of the land and should be determined when more specific data is available.
- 6 - A program should be initiated to provide for wildlife easements and, if necessary, acquisition of private lands immediately adjacent to the refuge which are needed for wildlife purposes.
- 7 - Construction of developed campgrounds, floatplane landings, boat launching sites and etc. should be carried out only if the construction and use of such facilities would have no negative impacts on the wildlife resources. A program of dispersed recreation opportunities should be favored over developed sites. It is more cost effective and fits in better with the objectives of a wildlife refuge.

8 - Private cabin sites on public lands within the refuge should gradually be eliminated. This could be done by making the present permits non-transferable. If possible, private lands within the refuge boundaries should be acquired through purchase.

General comment: In Appendix 9, pages 177-180, allotment range conditions were placed in four classes. It appears that these are a combination of primary and secondary ranges. Conditions of the range should be based on primary ranges only and only primary ranges should be used to determine carrying capacity.

The 3% refuge-wide reduction in domestic livestock grazing should be born largely by the individual permittees (not grazing associations) who have a herd size of 500 plus head (Appendix 10).

We appreciate greatly, the opportunity to comment and your efforts to solicit public input.

Sincerely yours,

Laurene Grove
John Grove
Cheryl Rose
Eug. Tracy
Phyllis Grove

Responses to the Grove Family

1. Habitat management plans will focus on wildlife habitat (including cover and forage) and will prescribe grazing systems and rates consistent with achieving wildlife objectives.
2. In examination of HEP values compiled on allotments on the refuge, it has been concluded that additional water development would be detrimental to most wildlife species in that it would distribute livestock into areas now used almost exclusively by wildlife and that are needed by wildlife.
3. See response #1 above.
4. After careful consideration, the FWS has decided the overall impacts of a refuge-controlled bison herd are unacceptable and are not considered at this time in the Proposed Action. However, the FWS will consider livestock permittees running private bison herds in place of cattle.
5. The FWS has no plans to expand the refuge but will consider wildlife easements for private inholdings at CMR.
6. Compatibility with wildlife objectives is one criterion in recreation development.
7. The private cabin leases are under the authority of the Corps of Engineers, and the FWS does not propose for the COE to eliminate them.
8. Appendix 9, pages 179-182 is indeed a total of all ranges or range sites by condition class. After an initial inventory to establish range site, condition, and acreage, the ANM recommendations were subjected to a slope/water matrix in addition to soil restrictions. See Appendix 15, pages 195-199, DEIS. This analysis allocated forage to livestock only on what was primary livestock ranges.

510 Nevada Avenue
Libby, MT 59923
November 21, 1980

Ervin W. Staucke, Area Manager
Fish & Wildlife Service
Federal Building, Room 3085
316 North 26th Street
Billings, MT 59101

Dear Mr. Staucke:

I appreciate the opportunity given to comment on the Draft Environmental Statement for management of the C.M. Russell Wildlife Refuge. I am however, due to the very limited amount of time available, finding it extremely difficult to fully comprehend and then make a rational evaluation. I just received a copy of the plan on a recent hunting trip to the area and have less than a day to make the review. Also my total direct experience to this land is limited to only two visits of about ten days each.

The first and most significant omission that I have discovered is the bland way the most important resource was discussed. I am referring to the people living adjacent and near to the wildlife refuge. They and their ancestor who developed the area offer much more to our society than any number of wildlife or exotic species that might exist or be introduced in the future. There still exists amongst this herdy group a spirit of independence and self reliance that is nearly nonexistent in our general society. I believe that the number one priority and objective of any plan must be to preserve this unique and nearly extinct resource. Cattle ranching is their way of life, so every effort must be undertaken that prevents the weakening of this economy, while still adequately protecting our non-renewable resource the soil. I believe this can be accomplished without sacrificing or threatening the presently abundant herds of big game animals which I feel are the second most important resource of the area.

I believe an adequate vegetation and soil resource inventory was made, however, the sociological inventory and discussion is extremely muddled without a deliberate attempt to use the data presented. An economic analysis as required by the National Environmental Policy Act has not been made.

During my recent visits to the area I have been astounded by the rapid and wanton destruction wrought by the uncontrolled activities of the prairie dog. I can't believe that a responsible land managing agency would permit this obvious desecration to the land to occur.

I am opposed to the re-introduction of any wildlife species including the black footed ferret into the area. Once this is done any area which is then used by this species becomes sacred and all other resources become secondary or if in conflict eliminated.

Quit blocking vehicle routes. Everyone recognizes that damage does occur from excessive use the present and even projected use to the C.M.R. is minimal in relation to its size. I believe that rather than spending money to restrict use it is far better and probably less expensive to rehabilitate the local areas where excessive damage occurs. Manage the area for people not for the sake of wildlife. Also with the short time I have had to review this statement no where have I seen a proposed transportation plan. Is there one?

There are many more items in your report that I question the validity of. One is the relationship of slope versus water relative to cattle use. I would have to believe that a relationship of use is more closely related to a water-vegetative type than exists between water and slope. I am certain that by correlation of these three variables a much more accurate use projection would occur.

I must apologize for the jumbled response that I have prepared. My only hope is that you will not in haste make management decisions that are locked in without due consideration of present use. I believe that management of our public lands must be for the well being of the majority of people, not the few in the special interest population.

Thank you for this opportunity to respond.

Sincerely yours,

Bill Harner

Response to Mr. Bill Harner

1. FWS agrees with your assessment of CMR neighbors and will make every effort to work with them.
2. The entire economic situation has been reevaluated and the text rewritten to reflect the changes.
3. Prairie dogs are not usually the causative agent but are opportunistic which take advantage of past misuse or overuse of an area. They are wildlife and are extremely important to many other associated species.
4. The endangered species act does not preclude hunting, fishing, or any other form of recreation, nor does it preclude livestock grazing when these activities do not jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of their critical habitat.
5. Several hundred miles of designated roads exist on the refuge. Those suitable for continued use will remain open, while those susceptible to landslides, washouts, and wildlife conflicts may be abandoned or changed. Essentially, the road pattern will remain the same.

A transportation plan is beyond the scope of an EIS. The travel map is available for distribution to the public at the Lewistown, Slippery Ann, Jordan, and Fort Peck headquarters.

6. This concept is based on well-documented studies by Mackie (1970) and Knowles (1975).

1445 N. 10 St.
Manitowoc, Wisconsin
54220
November 14, 1980

Erwin W. Steucke, Area Manager
U.S. Fish & Wildlife Service
Federal Bldg., Room 3085
316 North 26th St.
Billings, Montana 59101

Dear Mr. Steucke:

I would like to submit this statement for the draft EIS on Management of the Charles M. Russell National Wildlife Refuge in Montana.

I was a participant in one of the teams which helped evaluate problems and possible solutions for the CMR Planning Team, early September 1977. In this comment I propose the adoption of Alternative C - Intensive Wildlife Management.

Decision-making on uses of public lands and the direction management should take, particularly in the Rocky Mountain region, arises out of a change in the public's perspective of the value of public resources to them today. This judgment is borne out in actions since establishment of a "Game Range" of about 1.1 million acres around a Ft. Peck Reservoir 44 years ago. This is as it should be. As acquisition of scientific information on functions of ecological relationships and specific habitat criteria has provided a basis for wildlife and fisheries resource management, and public appreciation of the importance of the husbandry of the land has followed along, policies for long term land and resource management have been encouraged.

Even more rapid changes face land users in this region today. Challenges are arising as a consequence of changed world conditions relating to energy supply. So life in Montana likely will be affected by what happens to a critical resource supply thousands of miles outside our nation's boundaries. And, as development of the Rockies encroaches on wildlife habitat everywhere, the significance of wildlife in all its diversity is seen by a large segment of the nation's public as a value they want to perpetuate for all Americans for all time to come.

If the demography of Montana and its neighboring States changes as energy development and community growth take place in the region, the use of, and importance of CMR Wildlife Refuge for habitat preservation could be different than is seen even now. If the predominant land uses surrounding and on the Refuge, ranching/grazing, shift to mineral development and industrialization, the importance of a refuge for wildlife to this new citizenry must be anticipated. Enclaves of public land being managed primarily to sustain diverse wildlife habitat, may, ultimately, be the prime source of such habitat in the future.

2.

From this long term perspective, I propose that the Alternative C - Intensive Wildlife Management - be adopted as CMR Refuge policy. I propose this for the following reasons:

- A. If water supply and allocations are altered, as a consequence of radical land use changes, this could directly affect the wildlife and fisheries resources on the Refuge. By concentrating now on specific management goals, the groundwork could be laid early on for sustaining aquatic and terrestrial environments which are related to and dependent on water. Heretofore, commitment of the nation's water sources and water ways has been directed toward Man's consumptive needs. Today, with a more sophisticated understanding of ecological relationships and interdependencies between Man and Nature, we need to build this broader view into our planning if quality of life is to be protected.
- B. Intensive Wildlife Management, once on line, with criteria for wildlife needs established, allows for all uses of the Refuge to fall into line: the amount and location of grazing; the amount, location, and degree of recreation opportunity; the kinds, purposes, and locations of water requirements; the potential impacts on habitat from any mineral development. In other words, the purposes for the Refuge are laid down in determining the criteria for management of the predominant resource - no matter what changes take place in the region. The nation's public could be assured that this particular place would serve future Americans for their quality of life, too.

To be more specific, Intensive Wildlife Management -

1. Permits the most effective options to be used to implement restoration and preservation of diverse habitats of the species dependent on this Refuge land. At least 45 mammals, and over 245 species of birds.
2. It lays out management goals in perspective - management for wildlife foremost; uses of other Refuge resources in ways which (1) support, (2) complement, or (3) do not conflict with or diminish these resources
3. Since soil condition is the primary base to provide both food and cover for wildlife, its restoration can be tackled wherever needed. Technologies exist to break up hardpan, commence the natural percolation of water through the soil, and provide a functional base for plant cover. Preservation of soil on the land increases soil productivity, its productivity of plants, its watershed function, and, subsequently, it prevents erosion. The domino action is restrained. The healing of the land, given time, begins its productivity of habitat.
4. Since diversity of plant cover where needed is a key provision to habitat and wildlife existence, its restoration can be directly attacked. Extensive burning, planting, prescription grazing, restoration of riparian vegetation,

3.

and cultivation of suitable land are proposed management tools.

An enormous amount of information is now available on specific habitat criteria - kinds of food, locatability of food, kinds of cover, relationships between food/cover/water - to permit precise plant establishment needed to reach management goals.

More than that, the information on hand as to which wildlife such as birds require which stages of plant succession for habitat, is translatable into management of shrubs, grasses and trees. Using tools such as planting, burning, and prescription grazing, can benefit wildlife needing climax or other than climax vegetation.

Having the main management objective, i.e. wildlife habitat productivity, foremost in the planning, the specifics of criteria can be more readily achieved.

5. Since wildlife requires movement between its food, water, resting areas and seasonal locations (reproductive/calving/fawning/nesting sites as well as winter/summer ranges) such habitat options must be built into management planning. Once determined, human or other activities which conflict with regular or seasonal movements can be planned for.
6. Restoration of riparian habitat associated with perennial and intermittent streams is important in the CMR Refuge ecology - natural fish reproduction - as well as for recreation enjoyment, so its achievement is desirable.
7. Since Ft. Peck Reservoir inundated some 100 miles of river bottom floodplains and riparian habitat, and the continuing fluctuating water levels inhibit growth of riparian vegetation, it is important that functions the floodplains served for migrating waterfowl be restored. Proposals to create pond and marsh conditions using Refuge rivers and streama could be developed.
8. If we are to have those species of wildlife which are endangered, we have to insure that habitat conditions they require are present on our public lands, particularly on those enclaves set aside for wildlife preservation. The optimum potential for sustaining or introducing these species on this Refuge could be realized with adoption of Alternative C: Peregrine falcon, black-footed ferret, swift fox, bighorn sheep are identified as endangered or unique species needing Refuge habitat. This Alternative is the only one permitting reintroduction of bison since the Refuge would be fenced.
8. Alternative C allows for greater response to needed planning changes in its continuing review procedures. Since the wildlife resource is the foremost consideration, planning could be more adaptable to rapid changes in land use, increased hunting and recreation demand as the region grows, and to proposed alteration of water allocation and timing.
9. Alternative C allows optimum opportunity for planning and managing access to, and public use of, the Refuge: roads, campsites, trails.

4.

I would like to comment on other issues related to the adoption of Alternative C, itself, or to problems arising out of proposed changes in management of the Refuge.

Reduction of Leasing Permits and Impacts on Grazers

While acknowledging the loss of 42 Man years between 1978 - 2000 for grazers as a consequence of adopting Plan C, the point is not made in this Draft EIS, and probably cannot be made, that other job opportunities may develop for the rancher. The current volatility of the energy situation combined with a national push toward energy independence, brings into any CMR Refuge planning the fact that grazing of domestic stock in the region of the Refuge may give way to energy development and concentration of uses of water for this purpose, primarily. Industrialization of, and in the area of the Refuge may place the issue of grazing in a different light.

What this says, then is that other job opportunities may develop for the rancher.

The situation of grazing on public lands is in a state of flux throughout the Rocky Mountain region. The reasons are varied:

- with adoption in October of 1976 of Public Law 94-579 (FLPMA), BLM lands were given a Multiple Use Management criteria.
- where energy and mineral development takes place, and where limitations of water are a problem in energy development, ranching is losing out.
- where large scale conversions of agricultural land to urban development is taking place, ranching and grazing are being replaced.

Ranchers using public lands are at a watershed situation in their operations. But they are not alone. Workers for auto makers, for textile manufacturers, for steel industries for western timber producers - are facing job loss or change. Changes from the World War II baby boom are reducing educational needs and teacher demand. Traditional church attendance is declining reducing job opportunities for clergy. The world is not the same; its values and purposes are rapidly shifting and choices have to be made for society.

We are shaping a land here in the Rocky Mountain region - just as we shaped it a hundred years ago when the homesteaders set out into the wilderness. Today, the rules are changing in response to public policy. And, in each change, some sector of the society is hurt. But the vitality of the American way lies in the fact that change can take place through democratic processes and people find and make jobs when new enterprises come on line.

5.

Changes in Fish & Wildlife Service Policy Needed to Accommodate Adoption of Alternative C

Policy for Agencies managing public lands is decided in order to permit the Agency to meet its mandate. Mandates are established in response to public interest in and concern about the ways and purposes for which the land is managed. Significant changes in purposes of management have taken place in the Forest Service, the BLM and the Fish & Wildlife Service in order to meet the changing needs of the nation's public. Many recent changes have come about to meet non-consumptive demand related to recreation enjoyment.

Faced with oncoming shifts in ways of using public lands, particularly related to energy development, and in order to have optimum opportunity to scale the CWR Refuge to a different value base, the necessary changes in FWS management prerogatives should be authorized. Such changes and needs for them should be identified in the Final EIS.

Intensive Wildlife Management - as set forth in Alternative C - should not be dropped from consideration on grounds that sufficient management leeway is not presently available.

Funding for Intensive Wildlife Management - Plan C

The Draft EIS states that an amount of \$30 million will be required to carry out Alternative Plan C. Again, I repeat, that I do not believe Plan C should be dropped from consideration on grounds that this amount of money will not be made available through the Federal budget. I propose, then, that before a decision is made on a Plan, that alternatives for providing the needs and work costing \$30 million be explored.

I have been working on public lands management issues in the Rockies since 1971. And, while I have seen an increase in both staffs and management funding for fish and wildlife resources for Federal Agencies, I do not anticipate really adequate budgetary allowances for the immediate years ahead. Across the board! This is incongruous! While a larger segment of the public demands broader management programs for the fish, wildlife and recreation elements, Congress has failed to fulfill this need, realistically. I propose, then that the FWS explore a variety of alternatives which might reduce costs for implementing Alternative C. My suggestions stem from a belief that there is a public constituency who cares enough about its public resources to be willing to volunteer help, and that a greater share of management costs will have to be located outside Federal ability or willingness to meet costs required.

1. What affiliations can be made for the scientific/research/monitoring of planning actions among State and Federal Fish and Wildlife as well as University staffs?
2. What sharing of management equipment, i.e., equipment used

6.

for ripping soils, can be shared (loaned or rented) at all levels of resource management between State and Federal Agencies? (other than what takes place now) Even if there are delays in completing planning, where cost is the issue, what shared options exist other than what may take place at present?

3. What costs can be reduced or eliminated through use of regular or seasonal volunteer help? Retirees? (Men and Women) 16-17 year old supervised Youth Groups?

Possible Retirees talent can include: archeologists, artists, agriculture specialists, fisheries and wildlife biologists, botanists, carpenters, ecologists, engineers, foresters, geologists, historians, hydrologists, mechanics, ornithologists, painters, teachers.

In the early 1960's the Park Service hired summer "interpreter" and trail guide help from above named sources and they developed an enormously valuable program. (Museum, education center, the guided hikes, and campfire programs)

Possible use of volunteer help can include: development of, construction of, and maintenance of educational and interpretive functions: wilderness use and trail maintenance and monitoring; restoration of historical features; tree planting; installation of fences; construction of camp facilities, trail signs, and other interpretive options.

An adjunct to complete volunteer help might be payment for gasoline en route to Refuge and back and opportunity to spend a summer on the Refuge. Although the Park Service summer help were paid, and not all were retired, many regarded the summer job as a vacation opportunity. They were not subject to time limitations for staying at campsites.

There are several justifications for proceeding this way. With the number of specialists required now for better management of public lands, and increased costs, the era of federal funding to cover such costs may not survive. With the degree of interest by the public in their opportunities to use public lands for their enjoyment, the involvement of this public in the management problems and solutions of these may be imminent. (I don't mean just in commenting on Land Use Planning.) With the numbers of retired people in good health and usefulness, this usefulness needs to be developed. With the various efforts to serve the nation's growing youth, opportunities for their involvement are wide open.

Designation of Refuge Areas for Wilderness

Consideration of wilderness options does not appear in the Draft EIS. Since criteria for wilderness may be in conflict with some management planning, that planning which might compromise wilderness classification ought to be avoided. However, while road construction is the primary conflict, the Wilderness Act does allow, and is so interpreted,

7.

for necessary management to take place. Arguments the Forest Service used in Utah (1) that introduction of wild-life species once native to the area, or (2) that some motorized maintenance equipment necessary for some management situations, were not acceptable in established wilderness, are not considered valid arguments. The Wilderness Act allows for necessary management options.

However, the planned use of such management tools as prescribed burning, grazing, and planting - which manipulate plant succession - may require further interpretation. But this should not hinder what decisions are to be made now. The Refuge is confronted with problems of restoration of land which, left entirely to natural processes, might take generations to bring about.

My advocacy of the adoption of Alternative C - Intensive Wildlife Management - should not preclude future wilderness area designations. The issue here in the Draft EIS appears to be one of deciding the degree of emphasis to be placed on restoration and management of the Refuge in compliance with objectives of the National Wildlife Refuge System.

1. Preserve, restore and enhance in their natural ecosystems all species of animals and plants that are endangered or threatened with becoming endangered on lands of the National Refuge System.
2. Perpetuate the migratory bird resource for the benefit of people.
3. Preserve the natural diversity and abundance of mammals and non-migratory birds on refuge lands.
4. Provide understanding and appreciation of fish and wildlife ecology and man's role in the environment and to provide visitors at service installations with high quality, safe, wholesome and enjoyable recreational experiences oriented toward wildlife.

Alternative C - Intensive Wildlife Management - appears to me to be the most direct, the most efficient, and the most probable alternative for achieving goals stated for the Refuge System on the Charles M. Russell Wildlife Refuge.

Thank you for this opportunity to contribute to the decision making.

Very truly yours,

Dorothy Harvey

Dorothy Harvey
High Uintas Wilderness
Citizens for a Responsible CUP
Utah Water Resources Council
Colorado River Basin Coalition

Response to Mrs. Dorothy Harvey

1. This is inappropriate in an EIS based on current management goals and objectives.
2. Alternative C is not proposed for a number of reasons, cost being only one.
3. The text of Alternative C, Intensive Wildlife Management, has been revised in view of further evaluation. Costs for fencing and land acquisition would be considerably less.
4. The alternatives described in the EIS take into account the wilderness proposal now before Congress and are not in conflict with it.

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Erwin W. Steucke, Area Manager
Fish and Wildlife Service
Federal Building, Room 3085
316 North 26th Street
Billings, Montana 59101

OCTOBER 30, 1980

There are areas of critical concern that are not addressed in the Draft Environmental Impact Statement for the Charles M. Russell Wildlife Refuge. Other information needs clarification.

In the wake of the serious outbreak of rabies in bats and skunks in northeast Montana, we find that the EIS does not include any information on wildlife health, how this is monitored and what agreements the U. S. Fish and Wildlife Service has with the Montana Fish, Wildlife and Parks Department. The responsibilities of each agency and the agreements between them as it applies to the health of both game and non-game wildlife on CMR should be clearly defined.

In addition to rabies this year, last year in September the State of Montana Department of Livestock, animal health division, issued an alert to veterinarians throughout the state concerning the presence of bubonic plague in small rodents and animals in Montana.

This is of special concern to this area because of the CMR plan to expand habitat for prairie dogs to 20,000 acres without a management plan at this time. In a 1974 comprehensive study, "Status of the Black Tail Prairie Dog on CMR," there were 53 towns covering some 4,464 acres with 23 towns said to be expanding at that time. While the number of towns has more than doubled in just five years, from 53 to 112, the acreage covered by prairie dogs has only increased about 2,000 acres, from 4,464 to 6,500. We question the accuracy of that latest tabulation on acreage over which the prairie dogs have spread.

We cannot stress too strongly that the people of northeast Montana are concerned about such diseases as rabies and bubonic plague. Therefore, it is imperative that F&WS have a comprehensive wildlife health monitoring plan in its EIS.

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How can the destruction of thousands of acres of land by prairie dogs be justified under Executive Order 7509 which calls for protection and improvement of grazing lands and natural forage resources?

In appendix 9, range conditions, Permittee Burke has 15 percent poor, the highest percentage of poor range of any operator on the CMR. But what the EIS doesn't show is that Burke has the highest acreage in prairie dogs - 700 acres and expanding (1974) - in Valley County. Phillips County's largest prairie dog town covered 960 acres, expanding, and Garfield County, 640 acres, expanding, in 1974. Since all of the prairie dog acreage was compiled in the 1974 study, it should have been included as another column in appendix 9 because it is one of the most pertinent factors in range conditions on some allotments.

Executive Order 7509 also says that "nothing herein contained shall restrict prospecting, locating, developing, mining, entering, leasing, or patenting the mineral resources of the lands under the applicable laws."

A comprehensive report was prepared recently by the U. S. Geological Survey and the Bureau of Mines on the potential for oil, gas, coal and bentonite on CMR. Not even a short review of that 178-page report was included in the EIS statement. The report says CMR has already produced more than 200,000 cubic yards of sand and gravel, and still contains reserves estimated at more than 2 million cubic yards. How does this removal of sand and gravel fit into the management plan? What income does this generate? CMR also contains amounts of clinker, the baked or fused sediments above burned coal beds.

Rep. Ron Marlenee and Sen. John Melcher question the economic aspect of the EIS as it applies to grazing reduction. We echo this concern.

Your study has 268 references, none of whom are ranchers using CMR, county commissioners in the affected counties, the Federal Land Bank, other lending institutions, county assessors or local area consultants.

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Ranchers have indicated that they are more than willing to go over their specific livestock operation with F&WS personnel to discuss how grazing cuts will affect them.

Mostly, the EIS dwells on income. And even in this area, it does not mention income from the cabin leases.

Page 60 of the EIS notes that we in this six-county region pay higher per capita property taxes amounting to more than \$150 higher per person than for the state.

The EIS indicates six ranchers may be forced out of business, but in reality there could be more than that. Just one small rancher going out of business would pull \$8,000 in tax dollars out of the county, based on last year's figures. In comparison, under provisions of the Refuge Revenue Sharing Act of 1978, the payment made to local governments in the six counties was \$15,133.54. That amount is less than the tax dollars contributed by two small ranching operations, to say nothing of the tax on livestock that the counties will lose.

Our tax base on CMR has been stable for many years. But how long can the federal government guarantee stability?

An evaluation of the tax base in the counties should have been made in coordination with grazing cuts, plus the costs of implementing the plans covered in the EIS and the cost of the study itself. Only this way can we get some basic information on the economics of the CMR.

The EIS study team determined that the federal government is subsidizing AUMs on CMR. The revenue flowing into the U. S. treasury in 1979 for the 56,524 AUMs of grazing on CMR amounted to \$106,830. The six counties got back \$15,133. There was no explanation of the difference in conditions under which federal, state and private AUMs are leased to provide a fair evaluation of the worth of AUMs under different landlords.

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What about the state's 35,645 acres? What affect will the grazing cuts have on the utilization of these state holdings?

Under the proposed action, the EIS says private cabin areas would remain. Yet the consequences of allowing private cabins to remain, page 66 of the EIS, says "The retention of private cabin sites and developed recreation areas would continue to exclude a limited amount of land from use as habitat and result in attendant loss of wildlife population that would otherwise be associated with such habitat."

Condensed, this seems to say that cabins result in loss of wildlife, and this appears to be in conflict with the F&WS and COE agreement which stipulates that natural resources should be made available for public enjoyment and appropriate recreation provided that public use and associated development do not adversely affect fish and wildlife and their habitats.

This question needs to be pinned down. Do cabins adversely affect wildlife? If so, how does this fit into the agreement between F&WS & COE?

It becomes more confusing for the cabin owner when the EIS says that clarification of conflicting legislation and management responsibilities between COE and F&WS would be sought and a cooperative effort would be made with COE to determine ownership of all lands.

What lands? Is this the area where cabin owners have built summer homes or where recreation areas are located? What is the conflicting legislation?

These conflicts should have been ironed out before the draft EIS was presented for public comment. It is almost impossible to comment on such vital areas of concern when ownership of land has not been determined, therefore jurisdiction of management could change.

Since COE has been making plans to sell its townsite, where does this action fit into the CMR management plan since that site may become a part of Valley County's jurisdiction and an inholder of CMR?

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It's somewhat disturbing that CMR's number one goal is to attain and perpetuate a balanced, natural diversity of plant and animal communities favoring endangered or threatened species, than all other native species and finally desirable exotics.

It's a far cry from Executive Order 7509 establishing the game range that called for forage resources to be first utilized for sharp-tailed grouse and antelope, nonpredatory species and livestock. Coyotes and swift foxes do not seem to fit into President Roosevelt's vision when he signed the executive order.

It's obvious by now that Executive Order 7509 has been nullified. This is why we find it baffling that the executive order is included in the EIS while the documents which have brought about the changes that affect our lives today are not quoted at all.

The EIS mentions that the Pallid Sturgeon has been spotted and tagged as a threatened species. What exactly will that mean to fishermen? Restricted fishing areas? Where?

Hunters also have their complaints. More and more roads have been closed off, making it more difficult to retrieve game. The EIS statement does say that "improving roads would provide better access for fishermen, hunters and other recreationists . . . proper planning of road systems on the refuge would serve to minimize potentially detrimental impacts to wildlife." But does that really mean there will be more roads or less roads for hunters?

F&WS does provide maps showing routes open to motorized travel, according to its news release on the opening of the hunting season. Why wasn't this map included in the EIS or at least included in the recreation map, figure 1?

We feel that the EIS does not adequately address any of the real concerns of the people who live in this area.



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Although we cannot at this time recommend one plan over another because we do not have all the pieces of the puzzle, it has been the multiple use concept that most adequately fulfills the needs of the largest number of people.

Sincerely,

Ron Holland

Ron Holland, Publisher
Glasgow Courier



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Response to Mr. Ron Holland

1. According to the Montana Department of Livestock, Animal Health Division, rabies is endemic in Montana. Both skunks and bats are vectors; however, the significance of rabies in bats is not understood. Coyotes, raccoons, and foxes are not rabies vectors in Montana. Bubonic plague does occur in rodents and furbearers in Montana at very low levels. Cases of bubonic plague are extremely rare in humans, and no confirmed cases have been reported in Montana. The effects of the Proposed Action should have no significant influence on the incidence of either disease, rabies, or bubonic plague. A comprehensive wildlife health monitoring plan is beyond the scope of the EIS.
2. Some of the dog towns in existence in the 1974 study have remained stable, declined in size, or have even been abandoned.
3. See response #1 above.
4. Executive Order 7509 gives priority to wildlife. Prairie dogs are wildlife. Prairie dogs generally take over ranges that have already been overused or abused.
5. No commercial removal of sand or gravel from the refuge is planned. Minor amounts will be removed for refuge use.
6. The economic portion of the text has been revised to reflect the reevaluation of economic data.
7. Sixteen public meetings were held before the release of the DEIS to obtain input from the locally interested and affected public. One direct result is the inclusion of the Multiple Use alternative. To reference any or all of the attendees at these meetings would add little to the EIS.
8. The entire \$8,000 of taxes that is claimed to be lost if one rancher goes out of business is unlikely to be correct. Even if this is the amount of taxes paid by the rancher, some taxes would be received by the county from the land, buildings, etc., in its new use. Thus the county will only lose the difference in taxes between current use and future use. It is possible that these future uses (second home development, etc.) might increase the taxes reserved. Regardless, it is the new level of each under Proposed Action that is to be considered in the EIS.
9. The economic costs of the plans covered in the EIS is presented in Appendix Table 13c on page 211. The costs of preparing the EIS is a joint cost which cannot be allocated to any one plan.

10. The subsidy results not from a flow of federal funds (\$106,830 out and \$15,133 back), but from a resource subsidy to ranchers who receive a AUMs worth substantially more than \$1.89 to them for \$1.89. It is this difference that generates the subsidy.
 11. The grazing cuts will have no effect on the utilization of state holdings. The state sets the number of AUMs and FWS honors that number.
 12. You are correct that cabins and cabin sites do reduce wildlife habitat. However, these sites and leases were established prior to the Memorandum of Agreement between the COE and FWS, and therefore, the FWS will not recommend their elimination.
 13. There are areas of government land where management responsibilities are not clear; the FWS and COE will work together to determine respective management authorities on these lands.
 14. The COE has discussed the disposal of the Fort Peck townsite with the FWS. The FWS does not object to the selling of the townsite. FWS will cooperate with COE and Valley County to work out administrative details if the proposal is implemented.
 15. All legislation and executive orders affecting the use of the refuge have been cited in the EIS.
 16. There would be no restrictions because of this designation. See revised text.
 17. Several hundred miles of designated roads exist on the refuge. Those suitable for continued use will remain open, while those susceptible to landslides, washouts, and wildlife conflicts may be abandoned or changed. Essentially, the road pattern will remain the same.
- The map is available for distribution to the public at the Lewistown, Slippery Ann, Jordan, and Fort Peck headquarters. That level of detail is beyond the scope of an EIS.

AUGUST L. HORMAY
RANGE MANAGEMENT CONSULTANT

101 ACADIA STREET • SAN FRANCISCO, CALIFORNIA 94131

December 2, 1980

TO: Area Manager, U.S. Fish and Wildlife Service
Federal Building, Billings, Montana 59101

FROM: A. L. Hormay

SUBJECT: Comments on the Draft EIS on the management of the Charles M. Russell
National Wildlife Refuge dated August, 1980

I am a range management consultant with more than fifty years experience in range ecology and management with the United States Forest Service and the Bureau of Land Management.* I have believed and strived to promote the land management ethics expressed in the Land Management National Environmental Policy Act of 1969 (NEPA) that public land managers

- (1) "fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;"
- (2) "attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;"

and those expressed in the Federal Land Policy and Management Act of 1976 (FLPMA) that public land management--

"be on the basis of multiple use and sustained yield unless otherwise specified by law. The term "multiple use" means the management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; the use of some land for less than all of the resources; a combination of balanced and diverse resource uses that takes into account the long-term needs of

* A biographical sketch indicating my experience and qualifications in range ecology and management is attached. I was consulted by the Fort Peck Game Range Committee, and association of ranchers presently grazing cattle on the Charles M. Russell National Wildlife Refuge and asked to review and comment on the Draft EIS on CMR.

future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic scientific and historical values; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment."

The Draft EIS is seriously deficient in many respects. It does not measure up to EPA standards in hardly any way. It is misleading to call it an EIS. It does not contain a single management proposal of significance that has been studied, analyzed and carried through the planning stage ready for implementation. The factual basis for most proposals apparently still has to be obtained."

"An essential undertaking would be preparation of a habitat management plan for each allotment by 1985. These plans would spell out specific wildlife habitat problems and provide specific management actions to correct the problems, such as grazing seasons of use, prescribed burning, ripping, planting and rest from grazing if necessary..."

"Fences would be constructed where necessary to achieve each agency's objectives. The location of these fences would be determined when habitat management plans are written for each allotment. Forty-seven miles of boundary fence have been identified and are discussed further in range developments. These fences would not necessarily be on the refuge boundary. They could be constructed in the best and most practical locations. Other possibilities would be to locate new water facilities or implement specific grazing systems designed to reach each agency's objectives in suitable common allotments."

The draft consists mainly of plans and promises not of well thought out proposals substantiated by factual data.

EPA requires that EISs

"be prepared using a systematic, interdisciplinary approach and shall incorporate all relevant analytical disciplines to provide meaningful and factual data, information, and analyses. The presentation of data should be clear and concise, yet include all facts necessary to permit independent evaluation and appraisal of the beneficial and adverse environmental effects of alternative actions."

The draft is poorly worded and organized. Related material is scattered throughout the text, tables, figures, and appendices, making it difficult to focus on and comprehend any subject. It contains much detail and technical

2

information that is of little or no value in assessing proposed actions and consequences. Numerical ratings, index numbers, coefficients have no significance to ordinary mortals.

Information in Tables 1, 6, and 7 and Appendices 1, 2, 7s, 9 10, 14, and 15 has little utility. The draft is a burden.

EPA - An EIS

"shall to the extent possible not be drafted in a style which requires extensive scientific or technical expertise to comprehend and evaluate the environmental impact of a proposed EPA action."

It seems to me that too many alternatives are being proposed. It is hard to distinguish between some of them.

Alternative E calling for elimination of livestock grazing is not an alternative that could be acted on immediately so is not a viable alternative.

Alternatives A, B, C, D, are all multiple-use proposals. They differ only in degree of emphasis on the various uses. The manager of CMR has the authority to strike the balance in uses that best serves the public.

The two viable alternatives appear to be No Action (A)--present situation--and Multiple-use Action (B, C, D.)

On the other hand there is a dearth of factual materials for assessing the merits of proposals. It is not befitting a prestigious Federal agency such as the Fish and Wildlife Service to burden reviewers with such premature and poorly prepared statements.

EPA

"Primary attention should be given to those factors most evidently affected by the proposed action. The factors shall include, where appropriate, the proposed action's effects on the resource base including land, water quality and quantity..."

The first responsibility of any land managing agency is preservation of soil fertility and land production capacity. FWS fails to address this point in any substantive way. Yet it is proposing livestock grazing practices that promote soil erosion and degradation of the environment.

The draft contains a proposal aimed at a major objective on CMR, namely improvement of habitat for wildlife. This proposal is stated as follows:

"The most significant management actions to achieve habitat objectives would be reductions of livestock grazing, changing livestock seasons of use." (10).¹

¹ page number.

"Proposed livestock grazing levels would be 40,482 federal AUMs by 1985, which represents a 33 percent refuge-wide reduction from present federally licensed AUMs ... This reduction would range from 0-100 percent, depending on the allotment ..." (12).

"Generally the refuge would be grazed on a seasonal or continuous basis (9) ... and managed under the philosophy that light livestock grazing levels (0-35 percent forage utilization) are not detrimental to wildlife populations." (75).

Some of the results predicted from this action are:

"This type of grazing would provide the diversity of habitat conditions needed to achieve desired wildlife populations and diversity of species." (75).

"Overall habitat quality would increase 16-105 percent depending on wildlife species evaluated." (74).

"Approximately 25 percent of the grazed portions of the refuge would be in excellent condition by 1990 and 35 percent in excellent condition by the year 2000. Fair condition range would be reduced from the present level of 7 percent to an estimated 3 or 4 percent because of reductions in livestock on overgrazed allotments." (74).

"Soil erosion on these fragile areas would be reduced and essentially confined to geologic processes. Increased litter cover on areas considered to be principal livestock range would be expected."

"Bare soils on the most productive range sites, such as clayey, silty, sandy, and overflow, would be lowered from the present average range of 20-42 percent by 1986..." (70)."

There is no basis for such forecasts. It is speculation and wishful thinking. Results will not be obtained as stated with the grazing practices proposed. On many important habitat sites vegetation will be deteriorated rather than improved resulting in soil erosion.

It appears that a decision to reduce livestock use on CMR an average of 33 percent was made even before the range survey capacity figures were determined and that the EIS is a justification statement for the reductions.

EPA - The EIS

"shall serve as a means for the responsible official and the public to assess the environmental impacts of a proposed EPA action, rather than as a justification for decisions already made."

No attempt is made in the draft to explain the proposed reductions. No data are presented which the reviewer could use to assess the merits of the reductions. The following information is needed for an assessment.

1. Grazing capacity figures obtained through the range survey with explanation of cuts, if any, that are included in the figures for proper use, slope, inaccessibility, lack of water or other reasons.

2. Base capacity figures used by FWL to arrive at proposed capacities with an explanation of cuts if any included in these figures.

Other information needed to get a better picture of conditions and background for management proposals on CMR are

Vegetation, Present description inadequate.

List of the principal types

For each type

Acreage

Map (letter size) showing location, distribution.

Table Species composition and density.

Wildlife

List of principal species

For each species

Estimated present population (numbers).

Distribution map (letter size)

Total habitat area (acres)

Principal vegetation habitats in decreasing order of importance.

Grazing allotments (entirely or partly on CMR)

Number

Total acreage

Portion off CMR (acres)

Portion on CMR (acres)

Land ownership and jurisdiction in each portion.

On CMR

Area excluded from grazing by fencing, farming, etc.

Area not grazed because of slope, natural barrier, etc.

Area not grazed because of lack of water.

Area actually grazed (grazing area)

Total number of livestock grazed

cattle, sheep, horses and other

Vegetation use on 5 sites (average in past years)

1. In ravine and drainage bottoms.

2. Around water (ponds, troughs) and along streams to a distance of 1/4 mile from water.

3. Slopes up to 20 percent adjoining drainage courses between 1/4 and 1 mile from drainage.

4. Slopes greater than 20 percent adjoining drainage courses between 1/4 and 1 mile from drainage.

5. Table and benchlands to a distance of 1 mile from water.

Rate as none, light, moderate or heavy

The following information is needed on each allotment

Name

Name of permittee

Size

Area on CMR and Area of CMR

Land ownership and jurisdiction (acres) on each

5

On CMR

Acreage excluded from grazing (fenced etc.)

Acreage not grazable (slope, natural barrier)

Acreage not used (lack water)

Acreage actually grazed = grazing area

Vegetation types

Acres of each type (acres)

On whole area in CMR

On grazing area in CMR

Soil erosion each type

Acres geologic erosion

Acres (none, light, moderate, heavy) accelerated erosion

Livestock grazing

Livestock on CMR

Number (AUM) Present, proposed

Kind

Grazing season (dates)

Total AUMs

Federal

Present, proposed

Private

Grazing system

Present, proposed

The FWL has decided on light continuous grazing on CMR quite arbitrarily, justifying it with a superficial comparison of grazing systems reported in the literature. Comparisons of grazing systems can be made from information obtainable on CMR. Here light continuous grazing, deferred-rotation grazing and rest-rotation grazing are being practiced. Why hasn't such a comparison been made? If it has why aren't the results reported in the EIS. With rest-rotation grazing the vegetation can be improved and maintained and soil erosion controlled on all areas grazed by livestock on CMR.

A. L. Horman

6

Response to Mr. August L. Horman

1. The FWS computed AUMs from the inventory conducted by four contract range specialists in strict accordance with SES stocking guides. The AUMs derived from this method were then subjected to a slope/water matrix to determine availability to livestock. From this process, the Service computed the amount of forage available to livestock found in the Proposed Action. See revised Appendix 15.

More detailed information is beyond the scope of this document. The information is available for examination at the refuge headquarters in Lewistown, Montana.

2. Much of this information you have requested is available in the text. Please refer to the "Affected Environment" section, page 35-43 for information concerning geology, soil-water resources, and wildlife habitat-range resources. Appendix 5 (Federal stocking levels in AUMs under each management alternative (livestock), Appendix 9 (Range condition class breakdown by livestock operator and allotment), Appendix 10 (Summary of grazing permittee operations and impacts of implementing various alternatives), and Appendix 15 (Methodology employed in calculation of AUMs) address many of the points in your letter.

Other information beyond the scope of this document is available for your inspection at the refuge headquarters, Lewistown, Montana.

3. The FWS has made three comparisons. However, an examination of HEP values (Appendix 2) for most wildlife species by allotment indicate that light, seasonal grazing is superior to other types of grazing management for wildlife on CMR. This formed the basis for the general grazing recommendations found in the Proposed Action. This information is available for examination at the refuge headquarters, Lewistown, Montana.

Ervin W. Steucke, Area Manager
Fish and Wildlife Service
Federal Building, Room 3085
316 North 26th Street
Billings, Montana 59101

Dear Sirs:

My main concern with the proposed management as stated in the CMR ES deals with water recreation. The Game Range surrounds the largest body of water in the state of Montana. The present and proposed management objectives in the ES seriously jeopardize the recreational use, which is by far the best use, by keeping it isolated due to lack of developed access sites to the lake.

The Proposed Alternative addresses only a boat access site at Fourchette Bay. I do not feel this is adequate. I would like to make a few suggestions for increased recreational usage of the lake.

1. Boat ramps and recreational areas developed on the north side of the lake at the following sites:
 - a. South end of road 219 -- south of the UL Bend Headquarters.
 - b. South end of road 425.

2. On each of the already developed and suggested sites, I would recommend that some acreage be set aside for cabin development.

I feel that recreational use of the lake should be increased in conjunction with CMR's wildlife objectives. What prevents the Fish and Wildlife Service from increasing its management to include management of water recreation as they can control it by limiting access?

Therefore, I would support the Proposed Alternative if it included increased recreational development. Barring the rewriting of the Proposed Alternative to reflect an increase in recreation management, I would feel forced to support the Multiple Use Alternative. I feel the ES and the analysis missed the boat in not exploring an alternative that recommended increased wildlife and recreational management.

Thank you for allowing me this opportunity to comment.

Sincerely,

William S. Hubbell
William S. Hubbell
Box 1044
Malta, Montana 59538

Response to Mr. William S. Hubbell

1. FWS feels that adequate boat launch facilities will be provided under the Proposed Action. A boat ramp will be considered as a part of the proposed Fourchette Creek Bay Recreation Area, and although there is no ramp, boats can be launched about 2 miles west of the south end of road 219. The Code of Federal Regulations, Title 50, Section 26.35, states that there shall be no new cabin site permits issued for national wildlife refuges. Increased recreational use of the lake and Missouri River is part of the Proposed Action.

2413 Sheffield Circle West
Fort Collins, CO 80526

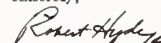
December 8, 1980

Erwin W. Steucke, Area Manager
Fish and Wildlife Service
Federal Building, Room 3085
316 North 26th Street
Billings, MT 59101

Dear Mr. Steucke:

Enclosed is a copy of my comments regarding the Charles M. Russell National Wildlife Refuge draft Environmental Impact Statement. Thank you for considering this.

Sincerely,


Robert M. Hyde

Enclosure
rmh/def

COMMENTS ON
CHARLES M. RUSSELL NATIONAL WILDLIFE REFUGE
DRAFT ENVIRONMENTAL IMPACT STATEMENT

Robert M. Hyde, Ph.D.
Range Scientist

After having reviewed and given testimony on six BLM Grazing EIS's in Colorado and the Challis in Idaho, I conclude that the Charles M. Russell National Wildlife Refuge EIS is written in a most biased manner against the range livestock industry. With a reported 92% of the range in the area in excellent or good condition and the 8% in fair or poor condition attributed primarily to prairie dog activity, why is it necessary or desirable to reduce livestock grazing by 33% or more. Why was not Maximizing Livestock Production one of the considered alternatives?

The Forward section stresses the importance of habitat for wildlife abundance and states that "this document emphasizes habitat quality and quantity rather than wild animal populations or densities." Normally that might be correct, but since this is essentially a grazing environmental impact statement and as such should at least contain big game population estimates. Is it correct to assume that the U.S. Fish and Wildlife Service (FWS) does not have accurate estimates of big game AUM's forage consumption by animal species. If this information isn't available, what is the basis for a 33% reduction in livestock grazing in the Proposed

Charles M. Russell National
Wildlife Refuge Draft EIS
Page 2

Action and is the expected increase of 24,000 AUM's big game grazing worth the significant economical loss? How real is the competition among domestic livestock deer, elk, Bighorn sheep, and antelope for forage? I can't believe it to be significant in view of the present 92% good and excellent range.

Bartlett and Taylor, Range Economists at Colorado State University, in their recent study on the "Economic Impacts of Reducing Livestock Grazing on Public Lands," determined that the direct economic impact for each AUM lost in Southern Colorado is \$24.00 gross livestock revenue. The multiplier effect for indirect losses is \$1.85 per dollar lost and for each \$1,000,000 lost in gross revenue, 52 jobs are also lost. On this basis the proposed action would result in a reduction of 19,480 AUM's livestock grazing with a direct loss of gross revenue to livestock of \$467,520, a direct plus indirect loss of \$864,912, a loss of 45 jobs in the area plus lost personal property tax revenue to the involved counties. Socioeconomics in the EIS are grossly misstated.

Following is a page analysis of the EIS.

Pg IX. Wildlife habitat on the refuge is stated in only fair condition. How is this to be interpreted? Is it based on past management or site potential? How can wildlife habitat be in only fair condition when range condition based on the SCS ecological climax system is stated as 92% good and excellent?

Pg IX. How does one separate poor condition associated with prairie dog towns and fair condition with poor distribution of livestock?

Pg IX. The farming and ranching economic situation is currently critical, but less than \$10,000 income generated from 800 acres of land farmed seems extreme!

Pg X. The U.S. Office of Management and Budget has become very sensitive and demanding of agencies to demonstrate cost effectiveness. Reintroductions of the species listed won't be cost effective and requests for appropriations for these activities may be difficult to obtain.

Pg X. Soil ripping on Charles M. Russell National Wildlife Refuge (CMR) will probably do more harm than good, and shrub plantings are very expensive and almost sure to fail unless individually watered and protected.

Pg X. What is the basis of reducing livestock grazing by 33% when almost all range is in good and excellent condition. How were grazing capacities determined and on what basis is forage to be allocated to livestock and big game?

Pg 1. The background information, current situation and conflicts or past management problems among the agencies involved is not addressed in sufficient detail.

Pg 1. I question the statement regarding the public's desire to reduce or eliminate grazing on public land. Granted a few so-called environmentalists would eliminate livestock, period; but the majority of the U.S. public still desires red meat at a reasonable price. This would not be possible without livestock grazing on public land. Some who are quite uninformed scoff at the 14% contribution of public lands grazing to the U.S. annual total, but we must remember

that most calves produced spend some time on public land. A 1974 report entitled, "Opportunities to Increase Red Meat Production From Ranges of the United States" projects that demand will increase from 213 million AUM's in 1974 to 426 AUM's by 2000. The Forest Service Resource Planning Act Assessment (RPA) also supports this increase. With 31 percent of the 835 million acres of forest and rangeland grazed in the U.S. being under Federal ownership there is no way this increase can be achieved without livestock grazing on Federal or Public Lands. Who is the public that wants grazing reduced or eliminated? Is that what they really want or is that what they think they want?

What are the desires of the residents of the six counties involved in CMR? They are the ones who suffer the economic loss and their wishes should carry more weight than someone who may never even visit the area.

Pg 3. If range is in good and excellent ecological condition, I question whether or not habitat deficiencies can be corrected without excessively expensive manipulations, even with zero livestock grazing. What sampling data reveal that improving the habitat for sharp-tailed grouse alone will correct habitat for 80% of all wildlife?

Pg 3. Is the 60,108 permitted AUM's the total for the resource area or are AUM's on private and state lands in addition to the total?

Pg 4 #1. What are desirable exotics? I don't support favoring them on CMR.

Pg 4 #8. Too often throughout the EIS, #8 is lost sight of. It has long been demonstrated on CMR that livestock can graze at the presently permitted numbers (60,108 AUM's) without undue conflict, in fact harmoniously with wildlife and without a decline in range

condition or downward range trend. Why recommend changing a system that is working or at least can work?

Pg 5 Wildlife #2. I question the advisability of introducing six black footed ferret pairs on six different locations. They are rather solitary but success of reintroduction might be enhanced by six pairs in three locations or less.

Pg 5 Range #1. Climax range is the highest level attainable on any site. It cannot be improved without artificial manipulation. Perhaps the writer meant to increase the percentage of good and excellent condition range although 92% is very, very high under any management for any kind or mix of large herbivores. Of all the grazing EIS's I have read, here is one that the involved agency could have pointed with justifiable pride at past management and present condition. Why was the decision made to paint a bleak picture and recommend a 33% livestock reduction?

Pg 6 #3. I can only hope the F&WS is sincere in the stated objective to "Provide stability and support to livestock users and their operations consistent with wildlife objectives." How can a 33% livestock reduction provide stability and support? Hogwash!

Pg 9. This page needs serious rewriting.

#2. How can anyone say that water developments are not consistent with wildlife goals? The return of vast pronghorn herds in Wyoming is rather directly attributed to range improvements primarily water developments. I strongly suspect the same is true in Montana and CMR.

#3. Soil ripping and shrub planting are a strong concern as mentioned earlier.

#4. What does this mean? Is F&WS qualified and authorized here?

Pg 9. Land title questions need to be resolved no matter what the selected alternative or mix in the decision document.

Pg 9 last paragraph. There is no consideration given to the possibility that wildlife objectives might not be met because of excessive wildlife numbers. This is just as much a possibility as is too many livestock. Perhaps livestock numbers could be zero and wildlife objectives still not met. With range condition 92% in good and excellent I can conclude rather safely that past stocking rates have been light. A 33% reduction in livestock AUM's is not justified. Several rest rotation grazing schemes have reportedly worked well in the CMR general area. Why not consider implementing well designed R-R systems with permittee design input, without reducing livestock AUM's? I assure you that in 5 to 15 years an increase in livestock AUM's could be justified consistent with reasonable wildlife objectives.

Pg 10. Why not fence on the refuge boundary? New water facilities is inconsistent with #2 on page 9. Man doesn't quickly manipulate "grazing capacities." Perhaps "stocking rate" or "grazing intensity" would be more appropriate.

Does livestock grazing on a prescription basis lend any stability to the livestock operator? I think not.

Pg 11. Prescribed burning as recommended recently has become the "in thing" and I think is being both misused and overused. I would expect prescribed burning to result in a rapid release of rubber rabbitbrush, one of our least desirable shrubs although reportedly

browsed to a limited extent on CMR.

Pg 11. Shrubs probably were once more abundant as stated. Reportedly they were lost during the drought of the 30's. I doubt that any kind of management practice short of costly clone transplanting with a large modified front-end loader, such as used by Energy Fuels on mined land reclamation, would be successful on shrub reestablishment.

It is frequently implied that shrub decrease was the result of livestock grazing. This I can't accept. In fact deer browsing has probably been more detrimental to shrubs than have livestock.

Pg 11. Is fencing the answer for riparian zones? How much riparian use should be attributed to livestock and how much to game winter use? Much riparian zone close browsing attributed to livestock is in fact caused by big game. Fencing riparian zones probably would be of little benefit unless game proof.

Pg 11 #7. Planting native browse with no grasses for wildfire rehabilitation is not ecologically sound.

Pg 12. What is the basis for the proposed 33% reduction in livestock AUM's? Why were not the four range scientists who were eminently qualified who conducted the survey not allowed, in fact encouraged, to compute the AUM's grazing capacity? Who could have been better qualified than were those who rode and surveyed 776,000 acres of CMR to determine the AUM's grazing capacity? This was either a gross error or the desire of F&WS to manipulate to suit their wishes. If the latter is the case, no wonder the permittees are mistrusting of F&WS as you stated earlier.

Pg 13. Ripping up to as much as 10,000 acres scares me. Perhaps

contour pitting on selected sites could be recommended but I question the advisability of large scale ripping for CMR kind of soil and vegetation.

Pg 16. I don't like the term "no-grazing areas" that will be periodically or at least occasionally grazed.

Pg 16. As stated earlier, fencing riparian zones frequently will not bring about expected results.

Pg 19. What is the basis for 2 years' rest following one season of use? This isn't necessary where range condition is good and excellent, trend is stable or upward and use is no more than moderate such as occurs or is proposed for CMR. There is no reason to be so restrictive even when wildlife interests are strongly considered.

Pg 24. I question that there would be substantial range improvement over the next 20 years.

Pg 26. Why would not the Multiple Use or No Action alternatives provide a wildlife refuge situation? Is CRM not now a wildlife refuge operating essentially in the No Action alternative sense?

Of the alternatives discussed I would strongly urge consideration of the Multiple Use Alternative. I would recommend that steps be initiated to insure whatever Congressional action necessary to make the Multiple Use alternative compatible.

Was Judge Flannery's decision in NRDC vs. Rodgers Morton et al. meant to result in reduced livestock grazing on good and excellent condition well managed range in a stable or upward trend? I hope not.

Pg 27. Socioeconomic comparisons are poorly done in the EIS. If the real value of an AUM is \$24.00 the multiplier being \$1.85/\$1.00 and the job loss of \$2/\$1,000,000 lost revenue as determined by Bartlett and Taylor, why not use those figures to compute a meaningful socioeconomic comparison?

Pg 30. The Proposed Action reducing total AUM's of the region by 0.3% is misleading and probably incorrect. When ranching operations are no longer economically feasible as could be the case with some CMR permittees, the possibility of subdividing always is strong. Nothing is more detrimental to wildlife than are subdivisions and associated people activities. When the total AUM's lost from both deeded and public lands are computed, the total may well exceed 0.3%. Also how critical to season of use and forage availability is the 0.3% regional reduction in terms of the total ranching industry? In some situations the 0.3% could be magnified several times.

Pg 52. The reference to livestock spooking game is another example of bias against livestock grazing.

Pg 52. The last paragraph doesn't really say much.

Pg 57. How can 70 acres of grain and 450 acres of hay generate less than \$10,000 of revenue? Why is 280 acres of dense nesting cover included as farmed?

Pg 60. It would be helpful to know what the numbers of people were who favored which alternative.

Pg 62. I can't agree with the next to the last paragraph, and it should not be included especially when it is admitted that no soil loss determinations were made. It is rather universally concluded that

soil loss is not critical on good and excellent condition range in an upward trend.

Pg 64. The last sentence is an overstated generalization and should be omitted.

Pg 67. I read earlier that the deteriorated range on CMR was attributed to prairie dog activity not over allocation of forage to livestock. Prairie dogs and deteriorated range means wanting one necessitates accepting the other, but please don't state that "present forage allocations would provide for undesirable aesthetic qualities..."

Pg 69. I question the presence of sufficient precision to estimate a 2% increase in excellent condition, a 5% decrease in good condition, etc. Even if the precision were available what is the logic in projecting some increase in excellent condition and a decrease in good range condition?

Pg 70. How is ripping 10 to 18" going to eliminate perched water tables? Ripping probably should be scratched in favor of some consideration of very selective and limited contour pitting on heavy textured soils.

Pg 71. I would think F&WS would be obligated to control prairie dog activity outside the CMR.

Pg 71. My experience with Bighorn sheep is that competition with livestock for forage is essentially nonexistent because of differences in habitat preference.

Pg 74. Last sentence second paragraph is very important. There is no way F&WS can expect good cooperation from permittees when they are forced to increase grazing intensity on deeded land as would

probably result if the proposed action were implemented. Wildlife wintering areas are frequently largely on deeded land. As long as there is agency cooperation, ranchers for the most part don't object strongly to partially supporting wintering game.

Pg 74. How could one expect "range communities to improve substantially from proposed forage allocations" when the total (Pg 80) would increase from 106,524 AUM's to 114,628 AUM's. With 92% of the range in good and excellent condition, there isn't too much room for improvement let alone substantial improvement and with an increase in total AUM's no less! These kinds of statements cause me, and I'm sure others as well, to doubt the validity of this EIS.

Pg 76. There is nothing in the range literature to substantiate the statement that "reduced grazing levels may have the tendency to open sagebrush stands and reduce canopy cover of sagebrush..." This is only wishful thinking.

Pg 76. Socioeconomic aspects need to be corrected, as discussed earlier. I dislike the casualness by which six or more operators may be forced out of business by Government decisions. These operators made decisions based on historic grazing intensities on CMR and associated public lands. They have incurred indebtedness typical of all of American Agriculture. They have been ignored through U.S. Agriculture Policy, and recent runaway inflation primarily because unbelievable Government deficit spending has put them in a most unfortunate economic position. Now they face the possibility of being forced out of business for no good reason. Is there not any justice?

Pg 89. Why the necessity to reduce livestock grazing by 4,500 AUM's? Earlier it was stated that prairie dogs were responsible for most range deterioration. Are their numbers also going to be reduced to allow range improvement? This cut would also be greater than expressed because of the 3,584 AUM's inactive. The actual cut would appear to be 8,084 rather than 4,500 AUM's.

Pg 89. Once again I think ripping is the wrong treatment unless there is some associated pitting for water retention.

Pg 89. This alternative could be modified to minimize or at least reduce adverse impacts of back country vehicular traffic.

Pg 90. Some prairie dog control apparently would be beneficial. But potential dens for black-footed ferrets would not all need to be eliminated, especially in areas of proposed reintroduction.

Pg 91. Next to last paragraph states "Range objectives would not be achieved with this alternative as wildlife objectives would not be realized." I don't agree with this statement. The long-term grazing intensity of wildlife and livestock in this alternative would be only 5.4% greater than for the proposed action. Range inventory and forage allocation methods are accurate to no more than $\pm 10\%$, so I am not convinced that range objectives could be met with the Proposed Action alternative but not the Multiple Use one where there is only a 5.4% difference in proposed AUM's use between the two.

In summary, none of the discussed alternatives is entirely satisfactory and may be criticized because only a limited array of alternatives were included. An alternative addressing "Intensify Livestock" should have been included with the two included extremes

of "No Livestock Grazing" and "Intensify Wildlife."

Of the alternatives included in the draft, the Multiple Use alternative appears to be the most compatible for the largest interested public.

It appears that with a somewhat more intensive management system, more wildlife, livestock and recreation could be realized without significant adverse impacts on any. Implementing a range improvement program to enhance both livestock and wildlife habitat is possible although more difficult than concentrating on only one or the other. Implementing grazing systems probably both deferred rotation and rest rotation systems could be beneficial to range, wildlife and livestock. More intensive livestock distribution programs including salt locations, water development and in some cases riding should be employed to benefit all large herbivores and help insure adequate winter feed supplies for big game and spring nesting cover for upland birds. I would recommend contour pitting in selected areas rather than ripping as a means to increase infiltration to increase total herbage production. I would also suggest a very cautious approach to burning as a tool to increase desirable shrub species. I have been directly involved in burning thousands of acres of range; and it can be a most valuable tool to increase livestock gains and to control shrubby species but, with the exception of rubber rabbitbrush, I am not aware of increases in shrubs associated with burning. Some new fencing may be needed to control livestock and/or game. Prairie dog control both inside and especially outside would be desirable. This would at least put FGWS

in a better light with neighboring landowners. Selected coyote control may also be advisable on occasion.

If the above-mentioned kinds of practices are implemented, considering the present 92% of the range in good and excellent condition, it would be possible to increase wildlife quantity and habitat quality without reducing livestock numbers. This is definitely the EIS where the involved agency should have pointed with pride to past range management; 92% good and excellent condition range and a proposed 33% reduction in livestock AUM's. Most incredible.

Response to Mr. Robert M. Hyde

1. Range condition and wildlife habitat condition are not the same. There are many more aspects to good wildlife habitat than diet and good range condition. See revised Foreword.
2. Maximizing livestock production was an alternative initially considered, but was rejected as being totally inconsistent with what the Congress and Service policy have determined to be appropriate purposes and use of national wildlife refuges.
3. The FWS computed AUMs from the inventory conducted by four contract range specialists in strict accordance with SCS stocking guides. The AUMs derived from this method were then subjected to a slope/water matrix to determine availability to livestock. From this process, the Service computed the amount of forage available to livestock found in the Proposed Action. See revised Appendix 15.
4. Competition, both direct and indirect, occur on dual usage ranges. See Appendix 16 for a review of some livestock-wildlife interrelations.
5. Using a linear programming approach to measure the change in livestock revenue per AUM on the CMR resulted in a direct value of \$12.87 an AUM. The difference between AUM values reported in Bartlett and Taylor may be due to differences in grazing conditions in Montana and southern Colorado. The multiplier used in this study was larger than Bartlett and Taylor, or \$2.67 for each dollar lost. So rather than understate the impacts, relative to Bartlett and Taylor, our multiplier overstates the secondary effect. However, our employment multiplier is smaller. See Appendices 10 and 13 for a more indepth analysis of these uses.
6. Please see Appendix 2, Habitat Evaluation Procedures and Values on Charles M. Russell National Wildlife Refuge, Montana. This section describes the methodology, criteria, and results of these surveys used to assess wildlife habitat on CMR. Most deficiencies are the result of past management, not site potential. Wildlife habitat and range condition are different and not comparable. Please see revised Foreword for a discussion of this relationship.
7. When mapped, most prairie dog towns were associated with poor condition range sites. Poor distribution of livestock, generally around watering areas, was associated with fair range condition sites.
8. The text has been revised.
9. The implementation of any of the alternatives depends on adequate appropriations. If money is not available, introductions would not be made.

10. FWS would like to emphasize that good range condition and good wildlife habitat are not the same.

See revised Appendix 15 for the detailed methodology used to arrive at the numbers of AUMs left for livestock after the wildlife habitat needs were met.

11. Page 1 of the DEIS merely addresses the highlights of past conflicts and problems. Greater detail is available in the refuge files in Lewistown, Montana; it is beyond the scope of an EIS. FWS believes it is more important to develop a positive course of action for the future, rather than dwell on past conflicts and problems.
12. Usually, the people who responded requesting reduction or elimination of grazing were referring to CMR, not public land in general. They want CMR to be managed as a national wildlife refuge with grazing used as a tool in habitat management. Those respondents that are involved in the livestock industry generally wish to see CMR management continue as is. CMR is a national wildlife refuge and is therefore responsive to national interests as expressed in Congressional mandates and national policies, as well as concerns of the local community.
13. Range condition and wildlife habitat condition are not the same, and corrective measures are not the same for each. Please see Appendix 2 for wildlife species habitat criteria.
14. AUMs on private and state lands are not included in the 60,108 federal AUMs.
15. Examples of desirable exotics on CMR are sweet clover, Merriam's turkey, ring-necked pheasant, and Hungarian partridge.
16. During 64 years of research on black-footed ferrets in South Dakota, never have more than two ferrets been seen on one prairie dog town at the same time unless it was a female with a litter of young. It is probable that they are not only rather solitary, but extremely intolerant of each other except during the breeding season. Be that as it may, introductions will be in accordance with the black-footed ferret recovery plan.
17. You are correct that climax range cannot be improved; the text has been revised. Please see also response #6 above.
18. Under the Proposed Action, during droughts and in years of low forage production, few livestock would have to be removed. Thus, if CMR permittees are less influenced by poor forage conditions, the local livestock industry is more stable and better supported.
19. This page has been revised.

20. More water developments than currently exist on the refuge would be used by wildlife, but are believed not necessary for wildlife. Water in Wyoming may have been a limiting factor for pronghorns, but water is not judged to be a limiting factor for most wildlife on CMR.

21. Constraint #4 simply means that the needs and desires of other individuals and agencies will be considered and integrated into CMR management, as long as they do not prevent the refuge from attaining its stated wildlife objectives.

The FWS has a fully qualified staff with many years experience in range management, wildlife management, and refuge management. The refuge is authorized by the establishing Executive Order and Public Law 94-223 to administer CMR for the benefit of wildlife.

22. There are presently six rest-rotation and two deferred grazing systems in operation on CMR. None of these systems have been shown to be significantly better than light seasonal grazing with a favorable season of use. Furthermore, intensive systems are a much more expensive alternative than the type of grazing generally suggested in the Proposed Action. However, wildlife and habitat objectives will determine the type of grazing on a specific area.

23. If it is determined a fence is necessary, it would be on the refuge boundary, if the terrain permits.

We agree new water facilities are generally inconsistent with #2 on page 9. However, once habitat management plans are developed, if they show a specific need for water development on the refuge, water could be developed on the refuge, or off the refuge but in the same allotment, or water could be developed on state or private inholdings. See also response #18 above.

24. Past wildfires on CMR have resulted in excellent shrub communities on many sites. Shrubs responding were snowberry, chokecherry, juniper, etc., as well as numerous forbs. There is no reason to believe prescribed burns would not accomplish the same. Rubber rabbitbrush is heavily browsed by wildlife on CMR.

25. Research has indicated that cattle are a primary detrimental factor influencing shrub availability.

26. Fencing can be one of several alternatives. All riparian areas fenced on CMR to exclude livestock only have responded very well. Based on previous experience, we anticipate continued success.

27. Grasses, forbs, and shrubs respond naturally after fires. The shrub planting would only be to establish seed sources in special areas for certain desirable species, such as buffaloberberry.

28. The basis for the proposed 33 percent reduction in livestock AUMs is to meet the needs of wildlife. See revised Appendix 15.

FWS whole-heartedly agrees that the four range scientists hired on contract are eminently qualified to conduct range surveys. However, once the field survey is completed, it is a matter of using charts, tables, etc., to calculate the AUMs available (1976 SCS National Range Handbook).

29. After reviewing comments and reevaluating the pertinent research, we have deleted ripping from the Proposed Action. The text has been amended.

30. The reason for two years rest following livestock grazing under the Intensive Wildlife Management alternative is that some losses of residual cover, food, and other important wildlife habitat components will be experienced if livestock are grazed each year on a given unit of the refuge. Also, it is important to recognize that wildlife habitat and range condition are not synonymous. Excellent wildlife habitat condition on an area does not necessarily mean that the same area is in excellent range condition.

31. In 1976, Congress passed Public Law 94-223 which changed CMR from a game range, which was primarily operated on a multiple use basis, to a national wildlife refuge so that it could be truly managed as a national wildlife refuge. The Proposed Action will accomplish this; neither the No Action or the Multiple Use alternative will. The wildlife objectives will not be met under these latter two alternatives.

32. Please see response #5 above.

33. The use of ranch budgets and the linear programming approach accounts, in the AUM values, for season of use and availability of substitute forage. The Proposed Action will only reduce AUMs by 33 percent. Full credit in determining stocking rates are given for private and state lands in the analysis.

34. Please review Appendix 16.

35. We have revised the text. Dense nesting cover are included as farmed because these fields were a part of the farming agreement.

36. The FWS does not intend to arrive at a decision based on "votes" for each alternative; however, shown below is a breakdown of individual responses (this does not include government agencies or private organizations):

(a) Support for Proposed Action with minor modification	196
(b) Generally support proposal but emphasize retaining cabins	53
(c) Support No Action or Multiple Use	57
(d) Miscellaneous letters	28

37. The text has been revised.
38. The statement is based on valid research.
39. Aside from prairie dog towns, much of the 7 percent of CMR in fair condition is in the Big Dry Arm, referred to in the text on page 69.
40. The increases and decreases in range condition were based on changes between the 1952 and 1978 range surveys, professional judgement, and current knowledge of the area. The logic in the increase in excellent range condition and a decrease in good range condition is that the trend in range condition has improved some between the 1952 and 1978 surveys, and will continue to do so, i.e., some present good range condition will improve to excellent.
41. See response #29 above.
42. Please refer to Eichorn and Watta, 1974.
43. We agree; "substantially" has been deleted in the text. Range communities will improve in terms of wildlife habitat requirements for the major species of wildlife as identified in the CMR objectives. Also, note that the total AUMs (106,524 and 114,628) are the combination of non-consumptive wildlife AUMs and consumptive livestock AUMs.
44. The FWS agrees that the literature in regard to this matter does not substantiate the statement. However, at least one well-known researcher, who has done considerable sagebrush investigation, feels that the statement is correct (Pyrah, personal communication 1980).
45. The economic portions of the EIS have been corrected.
46. The 4,500 AUM reduction is required under this alternative to practice proper vegetative (range) management in allotments where range improvement is needed.

Prairie dogs would be controlled to prevent their expansion onto adjoining private land and for human health and safety.

The inactive AUMs under this alternative would be included in the reduction, in addition to the 4,500 active AUMs. However, the inactive AUMs would be reactivated when wildlife habitat conditions permit.
47. We agree that the alternative could be modified to minimize or reduce adverse impacts. Examples could be closing roads, restricting the number and type of vehicles, etc. However, most proponents of the multiple use concept do not want these restrictions.

48. The total wildlife AUMs under the No Action and Multiple Use alternatives are 60,000 AUMs and 74,000 AUMs, respectively. These AUMs, according to range objective number 2, must be provided before livestock AUMs will be available. Thus, if wildlife objectives are not met, range objectives cannot be met, as stated in the text. Also see Tables 13 and 15 on pages 80 and 96.
49. Maximizing livestock production was an alternative that was initially considered but was rejected as being totally inconsistent with what Congress and Service policy have determined to be an appropriate purpose and use of a national wildlife refuge.

Box 649
Blairstown, Mo 64230
Nov 11, 1980

Erwin H. Stuebe, Area Manager
Fish and Wildlife Service
Federal Building, Room 3035
316 North 26th St.
Billings, MT 59101
Dear Mr. Stuebe:

My wife and I strongly oppose any expansion of wildlife facilities and habitat on the CMR game reserve. Instead we would favor any moves that would increase the amount of land that could be used or sold to private users.

We don't understand your reasoning that the amounts of wildlife would increase in any of your proposals. We have had a cabin on Fort Pick Lake since 1966. When we first built we were alone on the point where we are located. Rarely if ever did we see a deer. Occasionally we saw Hungarian partridges and grouse. Now that we have neighbors and all of us have trees and gardens, we see deer on a weekly basis. There are many coveys of Huns and grouse. It is common to see pheasants. In plain English, development by private parties has helped not hindered wildlife.

As further proof that wildlife is compatible with development, I can further attest that on the farm where I grew up we never saw a deer while I was growing up and there were many areas of virgin prairie. Now that the farm is practically all cropland, deer are regularly seen. For these reasons I see no reasons whatsoever to curtail further development.

Further it would be a great shame that the thousands of acres which make up the CMR game reserve were taken away from use by people - particularly the ranchers and farmers who were pioneers in the area and who built up property for future use by their families. I don't think that Fort Pick Lake and the Rams were built for the purpose of providing a wildlife preserve. It was built for flood control and power development and recreational use was really a secondary benefit.

We plan to oppose any and all plans which will curtail the people use of the

lands that make up the CML game range.
This includes all uses of the Lake for
recreation and commercial fishing. This includes
all private cabin sites. This includes all
farming and ranching leases. And in
addition we will work to return portions
of this range to private ownership wherever
and whenever feasible.

Sincerely,

Geoff Johnson
Alma Johnson

Route 2
Westby, Montana
October 20, 1980

Erwin W. Steucke
Fish & Wildlife Service
Federal Building, Rm 3035
316 North 26th Street
Billings, Montana

Dear Mr. Steucke:

I would like to express my support for the proposed action
management plan for Charles M. Russell National Wildlife Refuge.
I would also like to comment on three points which I feel were
not given adequate coverage in the draft management plan. The
first of these is the effect of soil ripping upon existing native
plant communities and also upon such archaeological features as
tipi rings. Second, I feel the Swift Fox did not seem to warrant
the same concern as some of the other endangered species. Is
this because the Swift fox, although almost certainly gone from
most of the northern Plains, is not "officially" on the endangered
species list? Finally, I feel that bison should eventually play
a much larger role, ideally approaching their original status,
in CML's ecosystem. If this is not possible at present perhaps
buffalo rather than bison could be given preference in grazing allotments
and at least a portion of the refuge reserved for bison.

Sincerely yours

Dennis C. Joyes
Dennis C. Joyes

Response to Mr. Dennis C. Joyes

1. Each alternative which proposes to introduce endangered species
also includes swift foxes. However, by law, species officially
listed as endangered must receive priority.
2. The FWS is willing to work with any permittee who would consider
the possibility of utilizing his AUMs for bison rather than cattle.

GALLAGHER, ARCHAMBEAULT & KNIERIM
PROFESSIONAL CORPORATION - ATTORNEYS AT LAW

FRANCIS GALLAGHER
G T ARCHAMBEAULT
MATTHEW W KNIERIM

808 3RD AVENUE SOUTH - BOX 812
GLASGOW, MONTANA 59230
(406) 236-6381

December 3, 1980

Mr. Erwin W. Steucke, Area Manager
Fish and Wildlife Service
Federal Bldg., Room 3035
316 North 26th Street
Billings, MT 59101

Dear Wally:

I have received the draft EIS for the Charles M. Russell
National Wildlife Refuge and offer the following comments.

I am a little amazed at the manner in which your agency ignores
its own regulations to arrive at a politically desirable re-
sult. At 50 C.F.R., Sec. 26.35 states clearly that under no
circumstance is the government to renew existing cabin site
permits within a national wildlife refuge. Further the phase-
out provisions of 43 C.F.R., Part 21, apply to any existing
permits on a wildlife refuge. I see nothing in the original
withdrawals that permits Fish and Wildlife to delegate its
management of so called "Corps areas" of the refuge to the
multiple use Corps of Engineers. If your agency is persistent
in this Corps - Fish and Wildlife distinction as to management
of lands in the refuge, then I question your ability to make
grazing cuts under the proposed action on so-called Corps
lands within the refuge. When one looks at title, all of
the lands are owned by the United States. The Corps was
delegated specifically the job of operating the reservoir
for power generation and flood control. The Fish and Wildlife
was delegated the adjoining lands for a wildlife refuge for
specific species and under specific conditions. Do you have
an executive order or congressional act wherein the cabin
site areas were deleted from the National Wildlife Refuge?
You admit in the EIS at page 66 that retention of cabin
sites results in a loss of habitat. Under Alternative C
(page 20) you seem to admit that Fish and Wildlife has the
power and the obligation under this alternative to remove
cabin sites. Why are you able to ignore the requirements of
your own regulations as to removal of cabin sites under the
proposed actions? I would like an analytical and reasoned
response to this question. At the very least, you should be
seeking congressional clarification of the cabin site issue
before attempting to implement a plan in violation of your
own regulations.

Mr. Erwin W. Steucke
Page 2
December 3, 1980

With regard to the grazing sites, I question whether the cuts will accomplish all that the planning team believes. I concede that the reduced numbers will probably lessen grazing pressure in the more rugged and less accessible areas of the refuge. However, the more accessible areas of good grass and areas close to water will continue to obtain considerable pressure from cattle since that is the nature of cattle. They tend to congregate near water and on the more accessible pasture areas. I predict that after a few years of this experiment Fish and Wildlife will discredit the present approach and seek even greater cuts. An educated guess would be 60% to 70% at today's stocking rate. As an alternative, I do not believe your agency has fully explored Horman's rest-rotation system which would provide commercially feasible stocking rates as well as excellent habitat for certain species of wildlife. Of course, this would require Fish and Wildlife to manage cattle as well as wildlife, but I believe it is in harmony with the purposes for which the refuge was originally established.

The EIS does not adequately address economic consequences of the proposed action. While I am not an economist, I am advised by those who are that evaluation of "direct effect" only is simplistic and misleading. To state that the only effect is \$134,000 for the loss of 19,625 AUMs is laughable. I personally have been involved in two ranch sales with CMR AUMs that were negatively effected in excess of \$134,000.00 figure by reason of Fish and Wildlife policy. Also, I don't see where Fish and Wildlife has made any effort to fully evaluate the potential loss other than to state flatly that the loss might be far greater and that all information upon which to make such an evaluation is "privileged."

I question your sincerity in soliciting comments from the public and other agencies. I suggest that your proposed action is a "baked apple" that regardless of input will be implemented. I understand you have disbanded as of October 1 the planning team and much of the "expertise" is no longer with Fish and Wildlife to respond to criticism.

I look forward to your response.

Sincerely,

Matthew W. Knierim
MATTHEW W. KNIERIM

MWK/cb

GALLAGHER, ARCHAMBEAULT & KNIERIM
PROFESSIONAL CORPORATION - ATTORNEYS AT LAW

FRANCIS GALLAGHER
G T ARCHAMBEAULT
MATTHEW W KNIERIM

808 3RD AVENUE SOUTH - BOX 813
GLASSBORO, MONTANA 59230
(406) 238-9331

December 4, 1980

Mr. Erwin W. Steucke, Area Manager
Fish and Wildlife Service
Federal Bldg., Room 3035
316 North 26th Street
Billings, MT 59101

Dear Wally:

The draft EIS is seriously deficient in many regards.

1. Contrary to EPA and Standards, the EIS seems obviously to be written as a justification for a pre-existing policy of the Fish and Wildlife Service for a staged elimination of any significant livestock grazing in areas administered by FWS. The proposed 1/3 reduction in AUMs cannot be justified on the basis of any data presented in the EIS. The EIS concedes that over 90% of the range is in good to excellent condition and that wildlife have prospered even at current grazing levels. Nevertheless, in order to justify a reduction in grazing levels dictated by FWS policy rather than by condition of the range or of wildlife, FWS has artificially declared areas having a certain degree of slope and more than a mile from water "inaccessible" for livestock grazing. The "slope-water matrix" set out in Appendix Table 15-A seems to have no connection with actual range conditions and is based on assumed behavior of livestock and unvariable mathematical assumptions. FWS was forced to resort to this kind of pseudo-scientific hocus pocus because the grazing reductions dictated by FWS policy could not be justified on the basis of the actual range survey conducted by the experienced range ecologists selected by FWS to conduct the survey.

In short, the draft EIS violates EPA standards because it was prepared not as a basis on which to assess the environmental impacts of a proposed action, but merely as a justification for a pre-existing FWS policy to reduce or eliminate any regular or continuous livestock grazing in areas administered by FWS.

2. The EIS is deficient in that it fails to provide data as to forage and range conditions either on an overall basis or on an allotment by allotment basis so that the necessity for the proposed reductions in AUMs could be intelligently evaluated.

Mr. Erwin Steucke
Page 2
December 4, 1980

There is no suggestion that slopes or areas more than a mile from water are presently overgrazed. Nevertheless FWS proposes to improve the condition of the range by reducing stocking levels, but while maintaining continuous grazing. Such reductions, by supposedly pulling cattle off of areas where they allegedly don't graze anyway, obviously does nothing to reduce the level of grazing near water, the areas most commonly overgrazed. Accordingly, there will be no "improvement" in these areas by the proposed reduction, which will justify FWS in coming forward next year or the following year with a proposal for yet further reductions in livestock grazing, even though the overall condition of the range continues to be over 90% good to excellent. This process will continue until FWS has achieved its obvious intent of reducing livestock grazing below the level of economic feasibility for present users. At this point, FWS will have achieved its unstated objective of transforming a productive multiple use area into a single purpose wildlife refuge.

The EIS is deficient in that it fails to provide information necessary for an intelligent evaluation of grazing capacity. The additional information required is noted in G.L. Horman's comments to FWS dated December 2, 1980.

3. The draft EIS is deficient in that there is no meaningful definition of the action proposed under the recommended alternative other than a reduction of 33% in authorized livestock grazing, at minimum. The door is left open for future cuts and ultimate elimination of livestock grazing on CMR. "If wildlife objectives were not being accomplished, additional changes in grazing would be implemented on specific areas not responding. These actions would include further reductions or increases in AUMs allocated to livestock, changes in seasons of grazing use and other changes." As previously mentioned, with the type of grazing FWS is proposing--namely continuous grazing--further reductions without end are inevitable.

None of the other proposed actions such as fencing, water development, soil ripping, etc. are described in anything other than general terms, so that it is impossible to tell, from an examination of the draft EIS, where or to what extent these activities would be implemented. Most are contingent upon further study and planning. As such, they do not meet the definition of a proposed action. For example, the draft EIS states: "An essential undertaking would be preparation of a habitat management plan for each allotment by 1985. These plans would spell out specific wildlife habitat problems and provide specific management actions to correct the problems, such as grazing seasons of use, prescribed burning, ripping, planting and rest from grazing if necessary." Thus, according to the draft EIS, even the planning of a major part of the "proposed action" is in the future.

Mr. Erwin Steucke
Page 3
December 4, 1980

There is not even a specification of changes in seasons of use by allotment for the proposed reductions in AUMs.

4. The draft EIS gives absolute priority to promotion of wildlife habitat in preference to promotion of livestock grazing or preservation of the range as a productive resource. This is an improper planning premise, inconsistent with both the legal dedication of this range and with its historic use over the past 46 years. Even without simple and relatively inexpensive range improvement such as limited amounts of interior fencing and construction of water sources which would better distribute grazing, the range is presently, concededly, over 90% in good to excellent condition.

5. Despite the focus on wildlife, the draft EIS provides no data as to the numbers of present or proposed wildlife populations, data without which it is impossible to determine grazing capacities.

The draft EIS is an effort to justify policy-dictated reductions in grazing which cannot be supported on the basis of the condition of either the range or the present wildlife population, which is obviously thriving. It resorts to hypothetical, statistical projections based on an artificially declared "inaccessibility" for areas of a certain degree of slope or more than a mile from water to justify reductions from grazing levels that would have been warranted by the actual range survey.

The draft EIS fails to provide any specific data, even on the presumed "slope-water matrix" which would indicate the basis on which reductions will be made on an allotment by allotment basis. The reductions are simply presented as conclusions, without any data as to the conditions on the specific allotments.

The draft EIS does not include any data by allotment as to availability of forage, livestock use, present and anticipated wildlife use or other factors that would explain how their proposed reductions were arrived at on a specific basis. The only data given on an allotment by allotment basis is in Appendix 5 which allocated the proposed cuts to each allotment.

Nor is data provided as to present or proposed wildlife populations.

It is evident that livestock grazing can be continued at the same or even increased levels without damage to the range, provided that better range management policies are employed. The proposed reductions are dictated by nothing more than a FWS policy to eliminate livestock grazing on areas which it administers.

Sincerely,
Matthew W. Knierim
MATTHEW W. KNIERIM
MWK/cb

Response to Mr. Matthew W. Knierim

1. Existing private cabins within the executive boundary of CMR are on either land administered as a State Park, e.g., Hell Creek, or on land withdrawn or purchased by the Corps of Engineers for the Port Peck Project and over which COE has retained its interest in recreational development and management. Conversely, FWS has the responsibility for all grazing within CMR.
2. The entire economic situation was reevaluated using a linear programming approach to more accurately delineate the economic impacts. The text has also been revised and expanded. See also Appendices 10 and 13.
3. Although the Planning Team has been disbanded, sufficient expertise exists in the FWS to respond to comments.
4. Range condition and wildlife habitat are not synonymous. The slope-water matrix used in Appendix 15 is based on valid scientific studies.
5. Please see Appendices 8 and 9.
6. See response to Mr. August L. Hormay.
7. The level of detail you propose is beyond the scope of an EIS. For example, habitat was evaluated on a section-by-section basis, and detailed plans will be prepared for individual allotments. There are over 1,000 sections on CMR and over 50 allotments on CMR; detailed information is available for review at the Lewistown refuge headquarters.
8. The priority of wildlife is correct, legal, and in accordance with FWS policy and mandates.
9. Because wildlife is a resource based upon habitat, all descriptions are keyed to that resource base. Actual wildlife populations may be influenced by factors other than habitat, but at CMR habitat is limiting.

Mr. Ron Koszyk
132 Walton Ave.
South Bend, IN 46619

November 28, 1980

Area Manager
U.S. Fish and Wildlife Service
Room 3035
Federal Building
316 North 26th Avenue
Billings, Montana 59101

Dear Area Manager:

I am writing to state my opinion on the proposed management of Charles M. Russell National Wildlife Refuge.

After reading this draft plan and much thought I had narrowed my choice to two: the Proposed Action and the No Grazing.

I like the whole plan of the Proposed Action except for the number of AUM's allowed for cattle grazing. As stated in Appendix 16, grazing by livestock has relatively few beneficial impacts upon wildlife. Heavy to moderate grazing is detrimental to wildlife. While light grazing does "no harm, no good". My idea of light grazing is not 40,628 AUM's as stated in Proposed Action Plan. Light grazing of cattle first of all should depend upon how the wildlife are doing each year. If there are droughts, erosion, or whatever wildlife should get first priority. This would mean no cattle grazing in bad years on CMR. In good years livestock should be restricted to no more than 15,000 to 20,000 AUM's (roughly). This is a drastic cut. This amount of AUM's would hopefully ameliorate the resulting conditions on adjacent private lands as compared to resulting conditions of a no-grazing plan. I feel this way because CMR is a wildlife refuge, devoted to wildlife.

I feel the no-grazing is ideal on paper but in reality it would cause grave environmental problems outside of the refuge and would be hard to implement. These factors are what changed my mind toward the proposed action.

Therefore, I am in favor to a revised Proposed Action bill which would lower the cattle AUM's to 20,000 or so. The number of AUM's is the only part of the bill which I object to. My opinion is based upon the idea that by the year 2000, these lands adjacent to CMR will be stocked to maximum capacity with livestock. This will be because of more population in the world which will demand more meat. Also development of synthetic fuels and oil shale, coal will increasingly

Page 2

put pressure on the wildlife out West. CMR will probably end up as an "island" refuge surrounded by energy development and crowding livestock. That is why I support a management policy which allows very light grazing. I feel this is enough to expunge the problems of the surrounding environment and yet to give good adequate protection to wildlife. I feel all these problems we have today regarding land management all belong to the past leaders. If they would have planned the development of the land, like they are trying to do in Alaska, we would all be better off.

I hope my opinion will help somewhat in the decision of which management policy to take.

Sincerely your,

Ron Koszyk
Ron Koszyk
132 Walton Ave.
South Bend, IN 46619

Response to Mr. Ron Koszyk

1. The proposed level of grazing is based on the total amount available less that needed by wildlife and is derived from recent scientific studies.

319 South 20th St
Worland, Wyoming
December 2, 1980

82401

Erwin W. Stuecke, Area Manager
Fish and Wildlife Service
Federal Building, Room 3085
316 North 26th Street
Billings, Montana 59101

Dear Sir:

It is apparent, after reviewing the CMR EIS, that management of the refuge must be for wildlife. Livestock grazing should be limited to that necessary to achieve desired habitat for wildlife.

The mention of shooting grazing income of \$107,000 being contributed to the US Treasury is very misleading. Management of the grazing activities by refuge personnel, no doubt costs nearly this much in salary. When one considers how grazing prevents achievement of potential wildlife habitat on a National Refuge, it is kind of mindless. Multiple use management is fine for BLM and FS but has no place on National Wildlife Refuges. I was kind of set back a step or two as I thought this practice had ceased.

If the CMR is to achieve wildlife habitat goals the "No Grazing Alternative" must be integrated into the "Proposed Action". If not done, the concentrated grazing will continue to maintain undesirable wildlife habitat conditions in many areas.

Sincerely,
Richard L. Kroger

Response to Mr. Richard L. Kroger

1. You are correct that it is misleading; however, many of the personnel salary costs would occur even if grazing were not allowed.

Richard A. Producers
2715 Ottawa
Butte, Montana 59701
723-6022
494-6375
587-6375

Erwin W. Stuecke, Area Manager
Fish and Wildlife Service
Federal Building, Room 3035
316 N. 26th Street
Billings, Montana 59101

Dear Mr. Stuecke:

Thank you for this opportunity to comment on the draft EIS for the CMR-NWR. In most areas I think this statement is really quite good and I commend you. Alternative B is my preference.

I believe that you have made one serious mistake in your calculations. I hoped to have time to prepare a thorough literature review showing your error, but I can see I won't have time. This will have to do.

As I read your EIS, it becomes apparent that you believe the vegetation of the CMR to be rather static. You think the vegetation will remain the same if no action is taken, and you believe that incremental improvements in composition will accrue as a result of rather minor changes in grazing. In this you are wrong. To predict the vegetation in the year 2000 as you do is pure nonsense. Forgive me now if I lecture you, but I think you misapprehend the nature of vegetation in semi-arid lands.

As Barnes (1959) points out, the distribution of natural grasslands is primarily a function of climate. Grasslands are found in regions of climatic extremes, such as the Great Plains with its low and irregular rainfall. Leopold (1959) notes that variability is one of the principal attributes of semi-arid lands and that "long periods of deficit moisture are indeed part of the pattern." If you doubt this, see Lomasson (1947) for his presentation of data for Miles City and Figure 1.

So what? Reed and Peterson (1961) found that the major trends in mixed prairie vegetation are set by major weather cycle, while the rate of change within trends is determined by grazing intensity.

Not only production but also composition is affected. In contrast, you state that "The climax plant community for a site varies slightly from year to year but the kinds and percentage of plant composition remain about

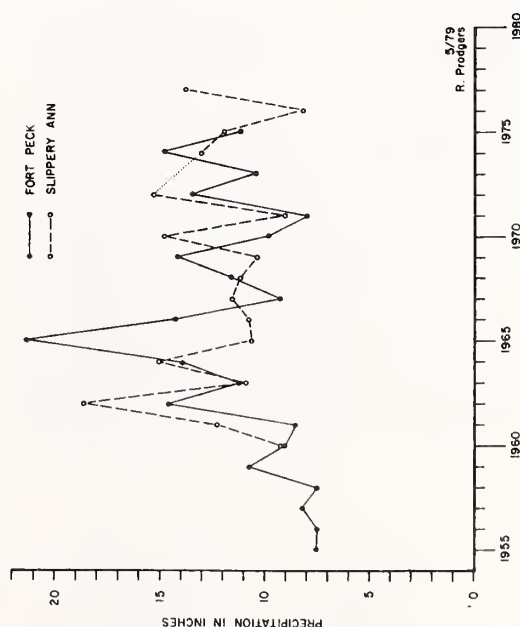


Figure 1
Annual Precipitation at Fort Peck and Slippery Ann Wildlife Station

the same if undisturbed." This may be true if you consider the weather to be a disturbance. Otherwise, you are wrong. Coupland and others (1960) warn against determining range condition based upon the climax in another phase of the weather cycle. I hope you'll read this paper. You should also read another article of Coupland's (1959) because of his excellent short literature review of drastic weather-induced changes in vegetation and his own finding of "remarkable" vegetation changes in response to weather.

There are two points I am trying to make here. First, the vegetational changes are a far more complex phenomenon than you take them to be, and weather can be a stronger agent of change than grazing. I believe you are on shaky grounds in your grazing assumptions too, but I don't have time to go into this. Second, I believe your range condition ratings are wrong--they are too high. This stems from the extremely high rainfall (and snowfall) of 1978 and your failure to recognize the effect.

Don't believe it? Then you'd better look at Figures 2 through 6. These presently unpublished data were collected in exclosures less than 20 miles from the CMR-WAR. Anyone familiar with the range condition rating system can see that 1978 had a far higher production of decreasers and increasers present in "climax" than other years. Note especially the graph for *Agropyron smithii*, the major Refuge grass.

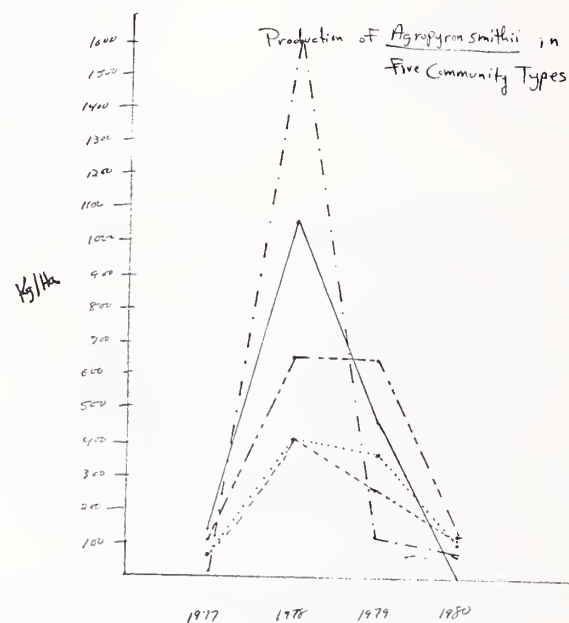
This is not a new discovery. The effects of low precipitation and grazing (or high precipitation and less grazing) can easily be confounded. In a study of Canadian mixed prairie with many principal species in common with the Refuge, Coupland and others (1960) noted that "each major species responded to improved moisture conditions in a manner opposite to its response to grazing." The effects of drought noted by Clarke and others (1943) and Ellison and Woolfolk (1937) are quite similar to the effects of overgrazing.

To conclude this section, you are dreaming when you predict the vegetation far into the future. I realize that other federal agencies such as the BLM and SCS do this, but it is just pipe dreaming. Second, your range condition ratings are too high, I cannot tell by how much.

On more minor points:

p. 10. Your section on habitat management is quite good.

p. 13. You state that in years of below average forage production, grazing permits may be suspended. Really? This takes guts. How would you know ahead of time? What would the leasee do with his livestock? Sounds good but I doubt it.



Agsm/Bgr —
Bgr/Agsm - - -
Stco-Agsm/Bgr
DDT-Agsm - - -
Aric/Agsm/Bgr - - -

Figure 2

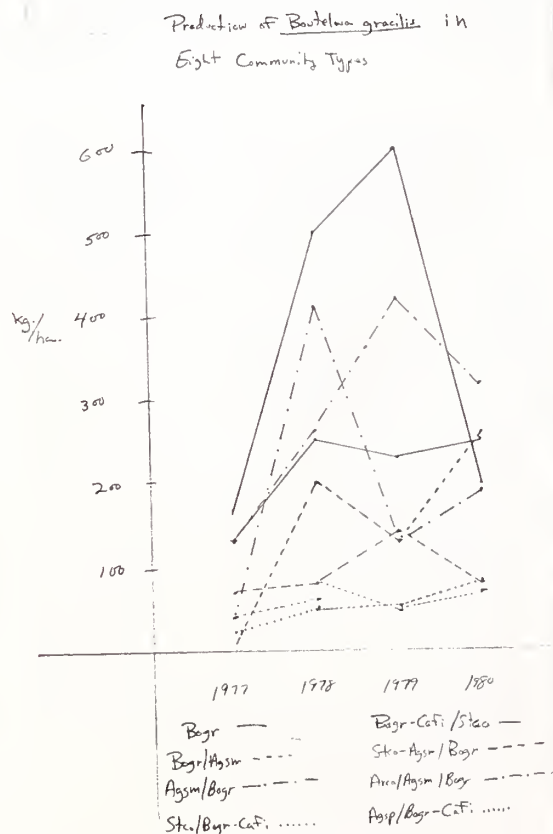


Figure 3

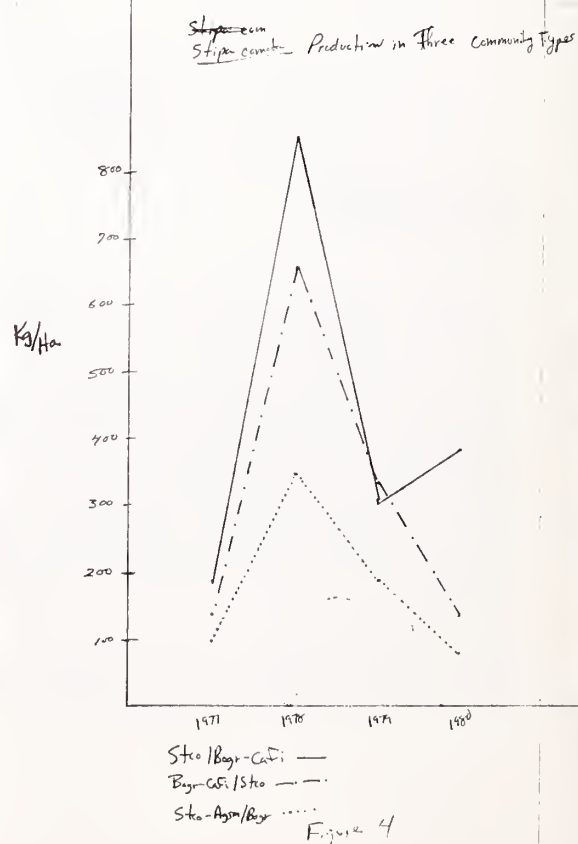


Figure 4

Agropyron spicatum Production in Two Community Types
Andropogon scoparius Production in One Community Type

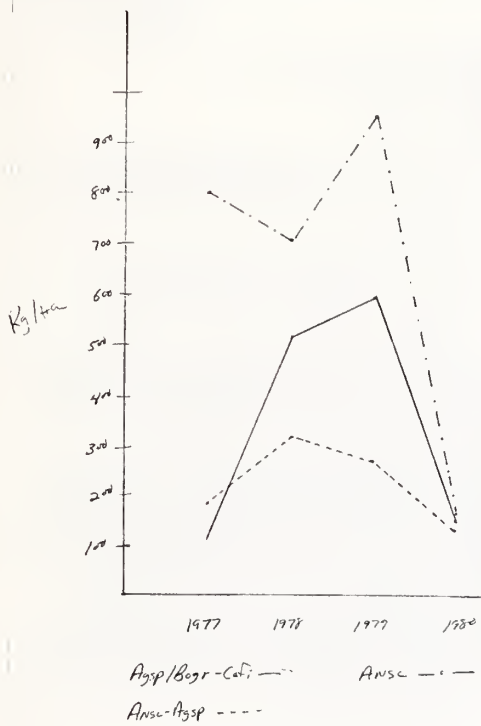


Figure 5

Carex filiformis Production in Two Community Types
Artemisia gander Production in One Community Type

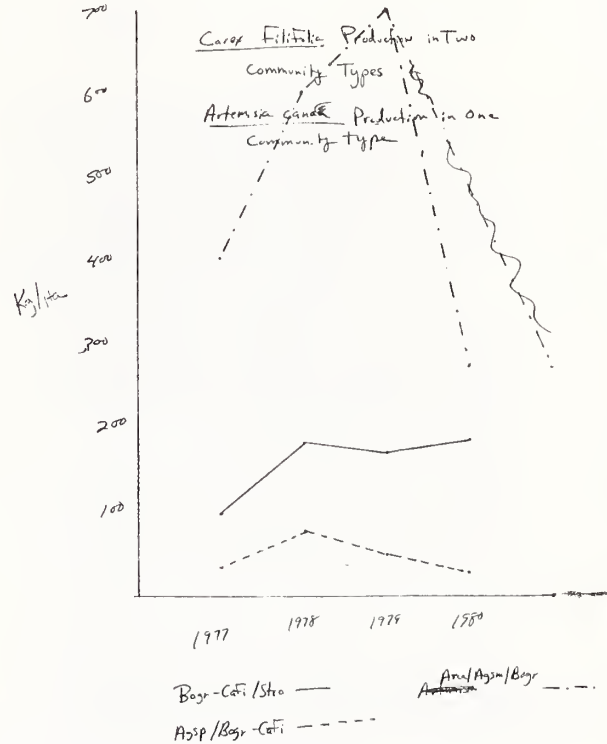


Figure 6

Your grazing "problem" is due to past mismanagement, but some factions are trying to make it look like an attempt at a solution is the problem. In past management those AUMs were not "excess".

It is alarming to see that "multiple use" appears more beneficial to wildlife and related concerns than "no action".

p. 64. Your idea of the relationship between sagebrush and grazing is too simple. I really don't have time to go into it, but Highway 24 is near a principal distribution line for big sagebrush (Morris and others, 1976)--ponder that. Overgrazed areas to the east do not develop into sagebrush stands. Be careful in extrapolating from other areas. You grossly oversimplify about grazing and sagebrush again on p. 76. And you are really way off when you lump silver and big sagebrush.

P. 83. You predict that shrubs would improve for 40-50 years, but elsewhere you note that buffaloberry was nearly eradicated by a drought. Of course, there can never be another drought.

What the heck is this "shadscale" you keep mentioning? I am under the impression that "shadscale saltbrush" (*Atriplex confertifolia*) is uncommon on the Refuge. The little annual *A. dioica* is common and even dominant on shale outcrops, but I have never heard of it called shadscale.

If this sounds over-critical, let me say that in general I think you did a fine job, it's high time that the CMR-NWR is managed for wildlife, and I think you have made an excellent beginning. I heartily endorse your proposed action, and I recommend that you get a good plant ecologist to direct your habitat efforts since wildlife aren't generally qualified.

Now let's see you put words into action!

Thank you for this opportunity to comment.

Sincerely,

Richard A. Producers
 Richard A. Producers

1-12/80

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Response to Mr. Richard A. Producers

1. The FWS agrees with your statement that weather can be a stronger agent of change than grazing.

The Range Site and Condition Inventory was completed by four range specialists on contract. These four individuals have between them over 100 years of range inventory experience, and the FWS accepts their conclusions as to range condition. It should be noted, though, that the FWS will manage the area on the basis of wildlife habitat, not range condition.

2. CMR is a wildlife refuge, and during years of poor forage production, a corresponding decrease in AUMs or changes in seasons of use will occur to protect range resources and wildlife values. Grazing changes could conceivably occur during the middle of a season as forecasting of droughts is not possible. This action would be in accordance with Executive Order 7509 and the legislative mandates of the FWS.
3. See revised text. FWS agrees that silver sagebrush and big sagebrush prefer different range sites and should not be lumped.
4. The FWS acknowledges that drought can impact shrub production and that a drought could set back shrub improvement goals.
5. We have revised the text appropriately.

410 Woodworth Ave.
Missoula, Montana 59601
December 3, 1980

Mr. Erwin W. Stenoks, Area Manager
Fish and Wildlife Service
Federal Building, Room 3035
316 No. 26th St.
Billings, Montana

Dear Mr. Stenoks:

I wish to express my support for Alternative B of the Draft EIS for the Management of Charles M. Russell National Wildlife Refuge with recommendations for the following amendments:

1. Include UI Bend waterfowl production increase from Alternative C.
2. Temporary fencing or grazing restrictions to assure riparian zone revegetation.
3. Plant Ponderosa pine east of Timber Creek to improve elk cover.

A shoreline scenic road would greatly increase human influence on wildlife; create cattle rustling and poaching problems; and consume large sums of money which could be better used to increase forage and cover for livestock and wildlife.

If the "Overall results of range conditions found on grazing allotments subjected to livestock grazing are excellent, 18 percent; good, 74 percent; fair, 7 percent; and poor, 1 percent," is not clarified, it is going to be politically impossible to reduce grazing by 33 percent. Rather than leading the public to believe that 92 percent of the land is in good or excellent condition, I would suggest that they be told that under the rating method used 72 percent of the land could be producing 51 percent or less of its capabilities. Also the above statement should not stand alone but should be given with the rating for the land outside of grazing allotments.

To justify grazing reductions it would be advisable to have another range analysis by range scientists who are more familiar with wildlife requirements and have not been associated with domestic grazing as a career. I have been on much of the area and have discussed it with range scientists and must conclude that range condition ratings in the Draft are too high.

I commend those who prepared the Draft, those who organized and conducted the hearings, and those who bit the bullet in selecting a proposed alternative. Thank you for the opportunity of participating.

Sincerely,

Donald Aldrich
Donald Aldrich

cc: Thomas L. Kimball
Chuck Griffith
Gary Day
Wilbur Rehmann

Response to Mr. Donald Aldrich

1. An extensive shoreline scenic road is not proposed for CMR.
2. Because habitat is recognized as the key to wildlife abundance, this document emphasizes habitat quality and quantity. Range conditions and wildlife habitat are not the same and should not be used synonymously. Range condition measures such parameters as species composition and production and does not address important wildlife habitat components such as residual cover, vegetative interspersion, and diversity, nor does it attach sufficient importance to key wildlife shrub communities.
3. The FWS computed AUM's from the inventory conducted by four contract range specialists in strict accordance with SCS stocking guides. The AUMs derived from this method were then subjected to a slope/water matrix to determine availability to livestock. From this process, the FWS computed the amount of forage available to livestock found in the Proposed Action. See revised Appendix 15.

Atlantic Richfield Company 555 Seventeenth Street
Denver, Colorado 80217
Telephone 303 575 7577
J. R. Mitchell
Public Lands Coordinator



December 11, 1980

Mr. Erwin W. Steucke, Area Manager
Fish and Wildlife Service
Federal Building, Room 3085
316 North 26th Street
Billings, Montana 59101

Re: Charles M. Russell National Wildlife Refuge

Dear Mr. Steucke:

Atlantic Richfield Company appreciates the opportunity to comment on the Fish and Wildlife Service's Draft Environmental Impact Statement (DEIS) on the management of the Charles M. Russell National Wildlife Refuge in Montana.

Because of its location between the oil-rich Williston Basin, the Central Montana Platform and the shallow gas area of the Northern Plains, Atlantic Richfield Company agrees with the Fish and Wildlife Service that the Charles M. Russell National Wildlife Refuge contains energy resource potential. In addition to the oil, gas, and coal resources mentioned in the DEIS, the refuge has the potential for geothermal energy resources. A limestone reservoir, known as the Madison Formation, lies underneath the refuge. This reservoir contains abundant warm to hot waters that have the potential for low temperature, direct heat applications such as space heating and domestic hot water heating.

Because energy resource potential exists in the refuge, we are concerned that the discussion of the management alternatives does not include a discussion of the management of these important resources. On page 3 of the DEIS, it is stated that management alternatives for minerals, which we assume includes energy resources, have been deferred to a later date. We believe that the development of effective mineral and energy manage-

Mr. Steucke
December 11, 1980
Page No. 2

ment standards and guidelines should be considered at this time in conjunction with the other objectives. To establish the goals of the Charles M. Russell wildlife refuge and to develop a management plan without considering the mineral and energy potential of the refuge will make it most difficult to develop, at a later date, an administratively feasible and effective mineral and energy development plan for the area. We recommend, therefore, that the Fish and Wildlife Service consider the mineral and energy resource potential of the area and develop a management plan that provides access to the area for exploration and development of these resources on the nation's public lands.

Atlantic Richfield Company supports a multiple-use land management concept for the nation's public lands. The nation can have an improved energy future by using an effective and responsible multiple-use land management plan on the public lands. The energy industry has demonstrated that resource exploration and development are compatible with sensitive environments. Hydrocarbon exploration and development activities on the Kenai Moose Range in Alaska, wildlife ranges along the coast of the Gulf of Mexico, as well as the development of the North Slope of Alaska and the construction of the 800 mile Trans-Alaskan pipeline are excellent examples that show that energy development and nature are truly compatible. Experience at Prudhoe Bay on the North Slope of Alaska clearly has demonstrated that caribou thrive, and that herds even experience growth within areas of intense resource development operations. For example, Mr. Angus Gavin, a qualified and renowned wildlife biologist, has conducted a ten-year study of Prudhoe Bay and has concluded that the caribou population in the area has not been detrimentally effected by oil and gas development. With respect to the environment, geothermal energy can be developed in an equally sound manner.

We, therefore, recommend that the Fish and Wildlife Service consider the national need for energy and the energy potential of the Charles M. Russell Wildlife Refuge in light of the energy industry's excellent record in operating in and around wildlife refuges and consider in its alternative management programs, a plan of action that would allow leasing and access to the energy resources in the refuge.

Mr. Steucke
December 11, 1980
Page No. 3

Again, we appreciate the opportunity to comment on the DEIS for the management of the Charles M. Russell Wildlife Refuge in Montana. If any further information is needed, please don't hesitate to contact us.

Sincerely,

Jay R. Mitchell

J. R. Mitchell

JRM/CMM/bbf

Response to Atlantic Richfield Company

1. The FWS is aware that geothermal potential exists in the Central Montana Region, including several areas outside the refuge.
2. Minerals are generally not open for development on national wildlife refuges, according to FWS policy. For this reason, mineral development guidelines for CNR were not deemed necessary. Ownership of mineral rights on CNR is fragmented between the COE, FWS, State of Montana, and private individuals. Some COE lands are withdrawn from mineral entry at this time. Development proposals on FWS lands will be considered by the Secretary of the Interior and a determination made in accordance with refuge objectives and energy policies at that time.

December 5, 1980

Erwin M. Steucke, Area Manager
Fish and Wildlife Service
316 North 26th Street
Billings, Montana 59101

Dear Sir:

Normally I set on the quieter side of the political scene, and have little to say, except for my privileged voting right. A letter of this nature, therefore, is somewhat difficult for me, but to make things right with myself and family, I must write this.

To begin with, my occupation is commercial fishing on the Fort Peck Reservoir, an occupation that I have been involved with for 14 years. In going back thru the Draft EIS once more, I still find nothing of any nature, pertaining to this aspect of impact on Northeastern Montana.

I have attended both EIS Meetings held in Glasgow, and rightfully so, the drift was in favor of the troubled cattle business in the area. The farming and ranching is vital to this area and naturally these people are going to fight to the ultimate end to retain their land and rights.

As one individual comment, and one letter being written, I have no idea what good it may do, but I feel that somehow we must be heard. The EIS as it is compiled, becomes very harsh as it goes into its five alternatives.

Most people in this area fully realize that the wildlife aspect of the CMR is very important to the economy of this portion of the state. Personally, I am an avid hunter and outdoorsman, as well as my wife and family. Not only to make my living, but also hunting, fishing, and just plain sight seeing on the CMR are very important to us in this area, and I feel that anyone trying to take any part of it from us is wrong and unjustified in any respect.

At the first EIS meeting in Glasgow at the Valley County Courthouse, the meeting coordinator stood before us and said that there would be no further changes in the road systems on CMR, until an EIS was drafted. This spring when I moved up the reservoir to Sutherland Creek Bay, I found a new "No Off Road Vehicle Sign" in the middle of the road that I had used to gain access to the water. I called the Montana Department of Fish, Wildlife, and Parks about the sign and was referred to a Mr. Robert Nagel of the Fish and Wildlife Service stationed at Fort Peck. I could not reach him that day and continued to use the road. Six weeks later I was ticketed 7/10/80 for using

-2-

the road and received said ticket on October 2, 1980. I asked for a hearing and appeared before U.S. Magistrate Gerald Schuster in Wolf Point, Montana on November 14, 1980, Case No. 338093. Ten days later I received notice from Mr. Schusters office that I had been fined \$100.00 and had ten days to remit. This incident keeps reminding me of what could be in store for me, my business, and anyone else involved in a similar circumstance.

The taking of rough fish from any water seems to be in accordance with all sport fishermen, and my operation seemed feasible to the Small Business Administration also, as they granted a \$70,000 guaranteed SBA loan to erect a new building here on the lake. I feel well assured that the SBA would never have approved the 15 year loan had it known of any restricting conditions on the CMR by the Fish and Wildlife Service, present or future.

In any of the Alternatives are adopted, I feel Alternative A(No Action) is the only one close to harmony for all concerned.

Fort Peck Reservoir being the only real recreation spot in the eastern part of the state, many people feel the water should have more good access than it does, as the roads to the water are very bad on the reservoir. Most are not all weather roads.

In closing, my business, (which produces about eighty to one hundred thousand a year to the area economy), is totally dependent on access, and use of the reservoir, located within the CMR. I therefore feel, as do many others involved, that many of the Alternatives are completely out of reason. We can all utilize the CMR without ill effects to one another.

Thanking you for all future considerations. This letter is late due to aforementioned court hearing and results.

Sincerely,

A. Ernest Austin
dba Valley Processing
Box 183
Fort Peck, Montana 59223

AEA:dma

copy:

1. Ron Marlenee
2. Pat Williams
3. John Melcher
4. Max Bausus

Response to Mr. A. Ernest Austin

1. FWS is aware of the commercial fishing on CMR. It is not expected to change in any way by the actions being proposed. The only reference to commercial fishing is the last sentence of paragraph 6, page 45.
2. Several hundred miles of designated roads exist on the refuge. Essentially, the road pattern on CMR will remain the same. A travel map is available at Lewistown, Slippery Ann, Jordan, and Fort Peck headquarters.

EIS Comment on Statement of CMR National Wildlife Refuge

The following comments and questions come from my family and me and do not represent any specific organized group, yet we feel that many of the concerns and values that we hope to emphasize are the same concerns of an increasingly large number of Americans. Like us, a great number of the public does care how federal lands are managed, no matter how distant, and finds areas especially sensitive when these areas are critical to wildlife.

We also would like to note that we have vacationed twice in Montana in the past few years and are familiar with the independent lifestyles and natural beauty of the area in question.

Livestock Issue

After careful examination of the draft EIS, we feel that the major problem facing CMR is the question of how much grazing to allow on the refuge. Following media coverage, we checked their reports with the facts and projections listed in the EIS to appreciate the pressures and conflicting desires of opposing groups. We studied each alternative and discussed livestock operations with longtime local ranchers in our area. Accordingly, we feel that the issue of grazing has been inflated to represent a threat to the symbolic way of life of the highly-visible and vocal cattlemen of Montana. Careful examination of the report shows, however, that even moderate grazing does not meet the basic objectives of the National Wildlife System.

The first objective of the Nat. Wildlife System is to preserve, restore, and enhance "in their natural ecosystems" all endangered or threatened species of animals and plants. Is land that is trampled annually and grazed by herds

of domestic animals a natural ecosystem?

In the past, livestock competition reduced necessary vegetation and habitat, contributed to the loss of two herds of bighorn sheep, caused widespread erosion, destroyed riparian ecosystems and depressed wildlife values. Admittedly, CMR is unique and was established under mandate to provide "surplus" forage for domestic animals. The real question to be answered is at what point can livestock graze without harming wildlife potential.

Alternative A---

Livestock concentration areas, particularly around watering areas, would continue to exhibit soil erosion and watershed quality problems because of poorer range conditions and trampling effects. (pg. 62) Vegetation around ponds would remain inadequate to provide nesting cover for waterfowl. (63) Trampling and consumption of desirable browse species would be extensive. (63) Forage allocations to livestock would continue to depress habitat values for wildlife. (66)

Alternative B---

The proposed action plan has many constraints on livestock use to enhance and rejuvenate the range conditions of CMR. However, the moderate reduction of grazing in this alternative seems calculated to appease political criticism rather than to benefit the wildlife of the refuge. Throughout the report, the benefits of reduced grazing are compared with the present situation, and always a reduction will improve wildlife values. However, this alternative only moderately improves each aspect of the refuge.

According to table 13, page 80, only one of the six critical habitats would be improved to excellent condition twenty years from now. Livestock would continue to endanger vital shrubs (72), disturb wildlife nesting and farming activities (76) and compete with wildlife for fall-winter forage (76).

Another conflict is that, under this alternative, livestock would be favored on the more level ranges near to water and wildlife are favored on steeper, more

inaccessible slopes, or in areas more remote from water. (75) This refuge was made a wildlife refuge partly due to its extensive system of creeks and river habitat, yet this is exactly where the predominate amount of grazing would be focused. Again this alternative does not meet CMR's goal of restoring and maintaining habitat necessary to sustain optimum populations of mammals and non-migratory birds.

Alternative C---

Since grazing would generally be on a prescriptive basis, grouse pronghorn and mule deer habitat would significantly improve. (82) Virtually all the desired areas on the refuge would approach excellent range condition by the year 2000. (85) The new grazing program with its graze-rest cycle would provide the optimal situation for shrub enhancement. There would also be less impact on cultural reserves since damage by livestock would be reduced.

Alternative D---

This alternative appears extremely unsuited for management of a wildlife refuge. By the year 2000, only waterfowl habitat would be excellent (96). There would be conflict between bighorn sheep and cattle (90) Vegetation in and around ponds would continue to receive heavy livestock use (90). Habitat quality and therefore capability to support wildlife would be increased only slightly over the present situation for most species.

Alternative "E"

Although no grazing would return CMR to its primitive natural condition, it would not necessarily be ideal. Rather the loss of prescriptive grazing would eliminate a key tool in the manipulation of sagebrush communities. (99) Also, effects on adjacent lands and political pressures would make this alternative an unlikely selection. However, throughout the consequence section covering this alternative, the benefits of eliminating grazing as they relate to habitat are emphasized. Therefore,.....

Suggestion:

Rather than be limited by these rigid alternatives, we suggest the following solution. To begin with, to meet wildlife habitat goals, livestock grazing should be reduced to a level where it is a prescriptive tool and used only to benefit the wildlife range. According to the EIS, that level lies between 23,000 and 30,000 AUM's. This reduced level would definitely effect present livestock operators, although regional economic effects due to grazing changes would be insignificant (30).

Yet any man's livelihood deserves respect and consideration, even if the situation pits the partial incomes of a few families against the public's right to the best wildlife refuge possible.

Therefore, those operators who presently have a high percentage of their livestock on the refuge should be the first to receive the limited amount of grazing to be available. Only 15 of the 87 operators are dependent on refuge lands for more than thirty percent of their AUM requirements, only 10 operators get 20-30 percent of their needs from refuge lands.

These ranchers should be offered first options as long as they retain their ranches or operations. As they sell out or retire, then others of the remaining 62 operators who presently use refuge range for a minor part of their grazing needs could then take over.

By this reasonable compromise, a maximum amount of the CMR refuge will truly provide excellent cover and food for the widest variety and greatest number of birds and animals. The last remnants of nearly-buried species such as bighorn sheep and peregrine falcons could once again find true refuge from more intensely developed or heavily grazed lands. And perhaps those Americans who take the time and effort to visit this large wildlife retreat, part of our rich national treasure, may actually have the chance to see abundant wildlife rather than just a steady view of grazing cattle.

And yet at the same time, those ranchers who really need their traditional AUM's would be the ones chosen to have their cattle graze at the new levels. No one would be forced out of work, even though sixty of the operators would definitely lose a small amount of grazing potential. And a true commitment to the wildlife goals of the Charles M. Russell National Wildlife Refuge might be set in motion.

Thank you for the chance to respond,
Respectfully,

John & Lara Buckley
John & Lara Buckley
19740 Tuolumne Road North,
Tuolumne, California

95379

Response to Mr. and Mrs. John Buckley

1. The Proposed Action is a prescription grazing alternative which is tailored to the habitat needs of each allotment.
2. Your suggestion is one alternative. However, FWS has made the decision to meet the needs of wildlife, and then allot any remaining AUMs in the allotment to the current permit holder in the allotment, regardless of how much of their operation is refuge-based.

305 East Story
Bozeman, Montana 59715
October 26, 1980

Erwin W. Steucke, Area Mgr.
Fish and Wildlife Service
Federal Bldg., Room 3085
316 North 26 th Street
Billings, Montana 59101

Dear Sirs:

I have recently reviewed the draft environmental impact statement on management of the Charles M. Russell Wildlife Refuge in Montana. In general I felt the document was well written. However, I feel compelled to comment as follows and try to clarify some misconceptions implied in the EIS and resultant actions of the U.S. Fish and Wildlife Service.

I was one of the four Range Ecologist that made the range site and condition inventory on approximately 775,000 acres of the CWR in 1978. We were not GCS employees as stated on page 169 of the EIS. All four of us were retired from government service and were hired under private contract to make the range site and condition inventory.

While covering the rangeland thoroughly by pickup, horseback or on foot we delineated the range sites, condition classes, located fences, water developments, and other physical features on aerial photographs. After covering all of the rangeland and completing the above inventory we strongly urged that the four range specialists be designated to complete the project by computing the animal unit months of grazing available in an average year. But, the FWS would not allow us to complete this phase of the inventory even though we were the most intimately acquainted with every parcel of land, grazing patterns, accessibility, etc..

Results of our inventory showed that 85 to 90% of the rangeland on the CWR is in "good" to "excellent" condition. With that high a percentage of range producing near-climax kinds of vegetation it is obvious that the stocking rate of either wildlife or livestock has not been excessive in recent years.

There is very little evidence throughout the entire refuge that indicates overgrazing by livestock or wildlife except for prairie dogs. Nearly all of the "poor" condition range is attributed to prairie dog concentrations.

It has been implied at various times that the proposed cuts in livestock numbers is based on the range site and condition inventory and recommendations of the survey party.

I strongly feel that the accessibility cuts suggested by the EIMS are far more severe than necessary.

It is true as stated in the lower 3rd of page 105 that "---- large coulees bottoms and extensive ridge tops are primarily livestock areas with the rougher, broken country better suited for wildlife." However, this does not mean that livestock do not or should not use the steeper lands. They do use the rougher land to some extent and if properly managed there is no logical reason, from a rangeland resource standpoint, why they should not be allowed to graze them. Wildlife especially utilize the hilllands and rougher land-scapes. This is where some of the most nutritious and palatable browse plants grow. They definitely have some grazing value.

Distance from water and steepness of slope in relation to accessibility of forage varies greatly from day to day and from season to season and by classes of grazing animals. I suspect the grazing animals will not always comply with the man-made EIS ruling that there are no AUM's available for livestock on the steeper, rougher lands or distances of more than 1 mile from water.

In the process of making the site and condition inventory we had many opportunities to visit with ranchers whose ranches border the refuge. Most of the ranchers showed an interest in maintaining the high condition range on the refuge and appeared eager to cooperate with the FWS in carrying out rotation grazing systems, water developments and other reasonable range management practices. Many of these practices would also enhance the wildlife habitat.

In closing I would like to reiterate that 85 to 90% of the CWR range is in "good" to "excellent" condition. It could not have been stockpiled excessively throughout the past years and maintained that high a range condition. I strongly feel the proposed 33% cut in livestock AUM's is unnecessary.

Sincerely,

Robert L. Ross
Robert L. Ross, Range Ecologist

Response to Mr. Robert L. Ross

1. The text has been amended.
2. The FWS does not intend to imply that there are no AUMs on steeper lands or at distances from water. What we do indicate is that cattle do not regularly utilize these areas; therefore, they will not be considered in figuring AUMs available for livestock.
3. Range condition and wildlife habitat condition are not synonymous.

November 12, 1980

Area Manager
Erwin W. Steucke
Fish and Wildlife Service
Federal Building, Rm 3035
316 N. 26th Street
Billings, Montana 59101

Dear Sir,

It has come to my attention that the U.S. Department of Interior-Fish and Wildlife Service is examining several alternatives regarding recreational facilities of the Fort Peck Lake with intentions of creating a New Management Program.

As a cabin owner of a leased lot in the Hell Creek State Park and also as an enthusiast of the recreational opportunities that I enjoy in this Hell Creek area I wish to state my feelings and concern towards those proposed alternatives as follows:

Alternative A-(No action)

I favor this alternative more than the other four. No additional funding would be required to finance projects listed in alternative B. Rather than create "visitor contact stations" and other costly projects that will be used by non-recreational persons or a very minor group of persons (as with the canoe trails), why not come forth with some additional funding to enhance those existing sites to make them more enjoyable and accessible to more people.

Please note that I am unfamiliar with park areas other than the Hell Creek State Park, but of that area, several items could increase the enjoyment of the area. They are as follows:

- a. Construct a boat ramp that could be used during high and low water levels. For most of the 1980 boating season the water level was sometimes two feet below the end of the ramp.
 - b. Provide for regular maintenance and upgrading of the access roads to the parks. Graveling of the road would provide year round access for those of us who enjoy fishing year round.
 - c. Establish fish planting programs for all parks on the lake.
- The Big Dry Area has been receiving walleye fish plantings for many years, where as other park areas have received "occasional" stocking of fish only when excess occurs.

Response to Mr. Bruce A. Roat

1. The level of Fort Peck Reservoir was much lower than normal during the 1980 boating season. It is difficult to construct and maintain boat launching ramps with highly fluctuating water levels. All agencies concerned are working to alleviate the problem.
2. Many of the parks and recreation areas within the refuge are administered by the State of Montana or the Corps of Engineers, along with the access roads. However, where FWS maintains the roads, maintenance and upgrading will be considered on a case-by-case basis.
3. The fluctuating characteristics of the reservoir preclude a diverse fishery. FWS feels the present stocking rate and schedule used by the Montana Department of Fish, Wildlife, and Parks is adequate for the available habitat.

Alternative B-(Proposed action)

Certain items of this program should be part of the Fish and Wildlife Service Program, although having nothing to do with fish or wildlife. This would be preserving those research areas, paleontological areas, islands, forest and vegetative areas, historic areas, and geologic sites within the boundaries of the Fort Peck Lake Area. Also, control of water level fluctuations as best as possible would help "stabilize" both fish and wildlife populations.

All other items listed I consider to be frivolous and am not in favor.

Alternative C-(Intensive Wildlife Mgt.)

I am strongly against this alternative. The most concerned and protective individuals of the park lands and wildlife are those cabin owners of the park areas. In Hell Creek, we are progressively contributing to the appearance and cleanliness of our leased areas not only for ourselves but for our neighbors as well.

Alternative D-(Multiple use)

I am in favor of establishing primitive campsite areas for campers, but not in favor of including the proposed action alternative items.

Alternative E-(No grazing)

I am unsure as to the intent of this alternative and therefore will not comment.

In summary, I am in favor of regular evaluation of Government Park programs. However, when changes are made, they should be progressive changes that favor a majority of people and age groups.

Thank you,

Bruce A. Roat
Lot #7
Hell Creek

B.R.
604 Mission
Helena, MT.
59301

Arne Mylon
Rick E. Roat
Rick E. Roat

BURTON W. ROUNDS
Star Rt. 2, Box 7C
Columbus, MT 59019

October 29, 1980

Erwin W. Steucke, Area Mgr.
U. S. Fish & Wildlife Service
Federal Bldg. Rm. 3035
316 N. 26th St.
Billings, Mt. 59101

Your Reference:
RW
803.6

Dear Mr. Steucke:

Comments are offered on the Draft Environmental Impact Statement on Management of Charles M. Russell National Wildlife Refuge.

Considering the constraints under which the Fish & Wildlife Service produced the draft EIS you and your staff are commended for the comprehensive coverage of the Statement. There are, however, some points on which I am offering some constructive thoughts to help you in your efforts to strengthen the final statement.

The Proposed Action (B) could benefit from inclusion of some of the better elements of the Intensive Wildlife Management alternative (C) and the Multiple Use alternative (D).

Cooperators have, in only few instances, been able to control time and amount of use on their allotments, as required in their permits, without a boundary fence. Also, a boundary fence, well signed, would help prevent unintentional violation of CWR regulations by recreationists using lands adjacent to CWR.

The analysis of impacts of fencing, or the lack of fencing should be strengthened in the final EIS.

The multiple use option proposes limited coyote control and without such control, the proposal in alternative (B) to introduce highborn sheep will fail. During recent periods of high coyote population in the Refuge, CWR personnel noted essentially no survival of the young of highborn sheep.

The impact of coyote control or lack of it should be more fully addressed in the final EIS.

There is considerable reference to proposed prescribed burning in the alternatives; however, there is only one reference used to support the thesis that soil erosion will be reduced if pine covered areas are burned. There should be a thorough review of the work of the Northern Rocky Mountain

Forest and Range Experiment Station on soil erosion and water infiltration re the wisdom of prescribed burning in ponderosa pine forest areas and particularly with reference to burning on slopes up to 60 percent!! I believe that a more complete analysis will support a reversal of the proposal to burn ponderosa pine, particularly on steep slopes. If not, then the environmental impacts of such burning on shelter cover for mule deer and other wildlife should be covered explicitly in the final EIS.

Each of the viable alternatives will affect the allocation of AUMs for livestock. The EIS recognizes the adverse economic impact of these actions. The seriousness of the economic impact on individual permittees can be attenuated by allowing the Area Manager and Refuge Manager the latitude to apply grazing reductions at times when such will have the least severe impact on the individual permittees. This may require a loosening of the time table for accomplishing certain objectives.

The introduction of bison is suggested in the alternative C, but there is no impact analysis for the kind of fencing that would be required to completely surround the area occupied by the bison. There would be impacts on the movement of deer and antelope and possibly bighorn sheep if they are in the same pasture. Further the impacts of no hunting of bison to control herd size should be addressed as this is a political liability.

Lastly, I could find no thorough analysis of the impacts of alternatives B and C on the daily or seasonal movements of deer, antelope, elk sharp-tailed grouse and sage grouse across the boundaries of CMR to fill their life requirements from habitat both on and off the refuge. Since many of the wildlife flocks and herds using CMR are partially dependent on habitat on lands outside the Refuge the impacts of the alternatives on this factor should be more explicitly covered in the final EIS.

The opportunity to offer comments on the EIS is most appreciated.

Very truly yours,

Burt
Burton W. Rounds

Response to Mr. Burton W. Rounds

1. A more detailed description of fencing and its impacts may be found in an environmental assessment on fencing available for review at the Lewistown refuge headquarters.
2. This has been addressed in two previous EIS's: Operation of the National Wildlife Refuge System, and Mammalian Predator Damage Management for Livestock Protection in the Western U.S.
3. That work has been reviewed, and the maximum slope reduced to 40 percent.
4. The FWS agrees, and this will be considered when planning implementation of the EIS.
5. After careful consideration, the FWS has decided the overall impacts of a refuge-controlled bison herd are unacceptable and are not considered at this time for the Proposed Action. However, the FWS will consider livestock permittees running private bison herds in place of cattle.
6. The FWS is cognizant that wildlife species on CMR do not recognize administrative boundaries. Elk movements off the refuge are addressed under Wildlife Objectives, number 9. No significant changes in the present movement patterns of other wildlife are anticipated with either alternative.

Glasgow, MT
Dec. 3, 1980

Erwin W. Steuke, area manager
Fish and Wildlife Service
Federal Building, Room X085
316 North 26th Street
Billings, Montana 59101

Dear Sir:

No action is the only feasible alternative presented at this time for the management of the Charles M. Russell Wildlife Refuges. None is fully acceptable.

The entire draft EIS does not adequately address the concerns of the people living in the counties in which CMR is located.

One of the most glaring examples of ineptitude in preparing the EIS is the economic evaluation that is incomplete and inaccurate. Not one single entity or individual directly involved in the economics of the area was consulted. This resulted in a lopsided, deceptive evaluation that focused mostly on income, ignoring completely the tax structures of the counties and the complexities of the ranching community's economic base with its interdependence on public lands outside CMR, private and state lands for overall financial survival.

The income factor itself has already changed drastically, and was clearly visible when the EIS was being prepared. The nation's economic slump and, most significant for this area, the cost of fuel now and in the foreseeable future are playing a dominant part in a sharp decline in tourism and use of CMR and COE facilities by persons other than those in the immediate area.

It is irresponsible to present plans for public comment without first clarifying conflicting responsibilities of the agencies involved and determining ownership

Add 2 -- CMR comment

of all lands within the CMR boundary. It is exactly these points of responsibility and land ownership that will affect the lives of the people -- the livestock operator, the cabin owner, the recreationist, the hunter, and all taxpayers -- in the counties affected.

We need to know exactly which agency will be setting policy for each specific activity because the economy as well as the lifestyle in the area are anchored to these policies.

For example, Figure I, recreation proposals drafted by several agencies, fails to identify hunting roads which are of prime importance here. Although the EIS states that hunting is compatible with other plans, the lack of hunting roads could curtail this activity, while at the same time circumventing the state's jurisdiction over hunting rules and regulations.

The final EIS should definitely include hunting roads on its recreation map.

A map also should be included on land ownership, spelling down exactly what agency owns what specific land, plus lands in private and state ownership.

The EIS stipulates that management alternatives for wilderness and mineral lands have been deferred until a later date. Policies governing both minerals and wilderness will have a tremendous affect on the lives of the people.

Since the U.S. Geological Survey and the Bureau of Mines have already done a 178-page report on oil, gas, coal, bentonite, gravel, etc., there is no reason for delaying a management policy in this area, and plans for wilderness management should have been in place even before wilderness was studied so the public would be able to evaluate how this will affect them. Delay in formulating plans for wilderness has already prompted heated debate and placed undue stress on the agriculture communities.

Most specifically, the final EIS should contain all of the pertinent information in Executive Order 7509, which was in the draft, and tie it into all of the vital information, not included in the draft, from the documents listed on page 32 to clarify the changes that have come about over the years to a point now where the management policy is far removed from the intent of the original executive order.

Add 3 -- CMR comment

It is impossible to make intelligent comments on the EIS because all of the hard core facts are missing, as outlined above, and more.

The proposed plans do not include an estimated price tag which is essential to taxpayers who must ^{begin} to review government costs and benefits with as much scrutiny as they do their own choices of expenditures in businesses and homes. This is vital to the continuation of taxpayer support of all government projects.

Government spending absolutely must be whittled down to size and both Congress and taxpayers must begin to evaluate projects such as CMR with this in mind.

Sincerely,

Gladys Silk
Gladys Silk

633 - 7th Ave. No.

Glasgow, MT 59230

Response to Mrs. Gladys Silk

1. The economics of the report have been reevaluated and the text changed appropriately.
2. Both the Fish and Wildlife Service and Corps of Engineers will work closely together to insure that their mandates and responsibilities are cooperatively attained. Please see Appendix 3.
3. The level of detail requested is beyond the scope of the EIS; however, a travel map is available at any of the refuge headquarters.
4. A map delineating ownership of nearly 1,000,000 acres is beyond the scope of this EIS.
5. These two areas are not discussed because decisions relating to them are at the Congressional and Secretary level. The FWS does not currently hold control.
6. This is beyond the scope of an EIS.
7. Please see Appendix 13 for economic impacts of the various alternatives and discussion of direct costs. Costs to implement each alternative were not developed.

There is no menses of the stoping of grazing on Scout Island.

I would like to get this grazing back, and have this entered on the records.

Skyberg Brothers (by) Melvin T. Skyberg

Wolf Point Rod and Gun club started elk herd and only the ranchers in the area were the people to determine the herd nos and the Fish and Game are to ignore the permits to keep herd down.

Melvin T. Skyberg

Response to Melvin T. Skyberg

1. Your statement is acknowledged. Scout Island has not been in an authorized grazing allotment in the past decade. Habitat there will be manipulated on a prescription basis using either fire or grazing, when needed.

P. O. Box 467
Absarokee, Montana 59001
12 November 1980

Erwin W. Steucke, Area Manager
Fish and Wildlife Service
Federal Building, Room 3085
316 North 26th Street
Billings, Montana 59101

Dear Sir:

Thank you very much for sending me a copy of the Draft Environmental Impact Statement for Management of the Charles M. Russell National Wildlife Refuge. I am reasonably familiar with the area and region, having visited many parts of it often enough to know the land, the situation and the many complex problems associated with it. Achieving a decision even limited to providing the best solution from the standpoint of the wildlife is not easy, let alone arriving at a management plan with overall optimum benefits. The draft EIS and proposed management plan fails to meet the objective, I believe. I have several specific comments which follow, keyed to page and section identifications of the text.

page viii: "... development of these resources (oil, gas and coal) outside the refuge and in the surrounding region could increase significantly in the future and would have far-reaching impacts on the refuge" is perhaps the most important commentary on the situation probably facing the refuge in the next several years, but there appears to be no follow-up to the mere recognition of the threat. A drastically changed situation on land surrounding the refuge will significantly alter the situation on the refuge itself. Actions of refuge management can play a part in determining some of the degree of energy development, and, in this case, plans for the refuge must take into account this potential. The refuge is not an entity unto itself, but is surrounded by similar land used by such of the same wildlife and livestock, critical to some species, and it must be considered so if proper maintenance of all the values the refuge offers is to be achieved.

p 1: Differing management philosophies and objectives on contiguous land with very similar conditions will inevitably result in problems. Wildlife does not respect the boundaries, livestock will only if fenced. A significant difference in land and habitat type is that off-refuge land is generally better pronghorn habitat.

Challenges as listed do exist. Not all environmentalists wish to see elimination or even severe reduction of livestock grazing, although range condition trends and a need to consider long-term range quality forces recognition of the advantages of significant reductions, perhaps only temporary. Careful boundary fencing may have some advantages. CMR cannot be treated practically as an isolated wildlife oasis, it is in fact part of the total ecosystem, and both the wildlife and livestock need to use land both on and off the refuge. Recreation demands, whether local, regional or national, must be subordinated to land capabilities, wildlife needs and livestock activities.

p 5: Wildlife objectives - (2) - I can only wish you luck in any introduction of black-footed ferrets. It's a very optimistic goal, especially to find and introduce six pairs. There's plenty of prairie dog habitat for them - probably too much. If you can do it and still keep the prairie dog towns within reasonable limits without endangering the ferrets - after you've found the six excess pairs somewhere - fine.

Mr. Erwin W. Steucke

12 November 1980

page 2

Range objectives - (1) - Although climax range condition appears superficially to be a reasonable goal, it won't satisfy needs of all wildlife. Further, how can you be sure whether it was ever reached over a significant portion of the land, especially considering its use over many centuries by many species of wildlife, perhaps the heaviest use being from bison.

p. 9: Alternative B - Overview - constraints.

1) reasonable.

2) Perhaps true, but what about ponds and waterfowl and shorebirds? Some such developments would be beneficial in achieving some compatibility between use by wildlife and cattle.

3) OK.

4) Necessary, although some adjustments on both sides may be desirable.

5) OK.

p. 10: Habitat management - Although BLM and FWS have differing objectives for livestock, the land is contiguous and wildlife needs both. Whatever methods are used to control conflicts, neither livestock operators nor wildlife should be required to suffer.

The attention paid to detail in the alternative would be good, but insufficient thought is given to some of the impacts which would result from severe reductions in livestock levels, especially those over a long time period.

Fire management policy, implemented with great care, appears to be a wise one.

Predator control policy is OK.

p. 13-14: Recreation and Cultural resources - Plan seems excessive. Is the objective to provide benefits to wildlife or to provide a magnet for would-be recreationists? Especially it seems unwise to point to particular areas including paleontological sites, even if intended for use by institutions and organizations as "environmental study areas". Such areas can be made available as appropriate to qualified groups and individuals, but care must be taken to limit any potential for vandalism. Designation of research natural areas is good, where appropriate, but such areas are not suited to recreational use as such.

In general and in many specific provisions the plan is far overdone.

p. 16: Mitigating Measures - There is a shocking implication that the FWS is waiting, vulture-like, for ranches to be sold merely so that some grazing allotments could be eliminated. Among other results not considered, however, is the strong probability that such ranches would wind up in the hands of energy developers, making industrialization of the area a greater possibility. This eventuality would have a far greater and longer-lasting detrimental impact on wildlife than retention of the grazing allotments. Wildlife uses land off the refuge, including private land, too.

The constraints against stock ponds and fencing and such management facilities are artificial and detrimental to the long-range good of the entire area and should be dropped, to permit use of such management tools. The statement points out the benefits even to wildlife of continued farming. It seems unwise to deny this option.

Mr. Erwin W. Steucke

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page 3

p. 18: Alternative C is an unwise and undesirable change to single use, doing more overall harm than good.

Endangered species introduction - Putting bison on show in a fenced area does little or nothing to enhance either the species or the FWS.

Habitat Management - Acquisition of all inholdings is unlikely.

page 19: Forage Allocation - Drastic reductions of livestock would impact too many ranchers and perhaps divert too much land to potential development.

page 20: Range Developments - The need for exterior fencing is only one of the detrimental features. Better and more desirable results can be reached with careful developments inside the boundary, including some fencing and some water developments. The proposal would change CMR unnaturally into an island.

Recreation - Although preferable to the proposed action, it may still be antioipating and encouraging heavier use than is likely. However, if ranching is indeed discouraged and if energy development and other industry moves in, it may well be that greatly increased use will result as population expands.

Mitigating Measures - Mitigating what? Mitigation should be presumed to compensate for impacts of actions taken. Gradual reductions in livestock allotments heading towards zero are not much of a mitigation, akin to death by strangulation rather than decapitation.

page 21: Alternative D - General. If this is impossible under present legislation surely some of the suggestions could be modified and adopted in ways compatible with both current wildlife welfare and continued livestock operations.

Habitat Management - The grazing plan sounds good. It is probably necessary for temporary reductions, perhaps staggered, in livestock levels, to restore range conditions to good or better quality. Cooperative farming is indicated to have some wildlife benefits, and can be continued. Appropriate fencing could aid in making livestock use and wildlife needs more compatible.

Forage Allocation - Good, but perhaps an even more equal allocation, or a slight weighting towards wildlife would be as acceptable or more so.

page 22: Range Developments - These should be constructed so as to optimize (rather than maximize) AUMs for livestock and wildlife and so as to create the greatest compatibility reasonably feasible.

Recreation and Cultural Resources - See comments under Proposed Action. This seems excessive, although the Lewis and Clark foot and horse trail may be desirable. Otherwise, it's too much.

Mitigating Measures - Implementation of rotation systems would, as suggested, eliminate at least some of the need to fence riparian zones and is a preferable solution.

If range quality trends on some allotments are not proceeding adequately nonuse is an acceptable and necessary step to take to achieve long-range objectives of quality range for both livestock and wildlife.

Levels of livestock grazing should be such as to permit optimum attainable use of the CMR by both wildlife and livestock, but not be lowered to the point where

Mr. Erwin W. Steucke

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page 4

ranching is no longer a viable activity and pressures to develop the land for other uses which would be incompatible with expressed goals and with wildlife welfare would become too great.

page 24: Alternative E - For the reasons stated above this Alternative is totally unacceptable as well as not possible, and should not be offered as an alternative.

page 26: Comparisons - You point out that "elk and pronghorns would receive additional benefits as they move on the refuge for part of their life cycle." This would be true only if an adequate amount of land outside the CMR boundaries remained as it now exists. However, the actions proposed could affect this, but this point is not considered. It is, of course, possible that significant changes could take place regardless of the final form of CMR management, but some consideration of this potential and some steps of alleviation would be desirable.

page 27: There is recognition that there would be little wildlife benefit from the Intensive Wildlife Management or the Grazing Alternatives. In fact, there would probably be overall detriment to wildlife habitat. It may well be that for the same reasons, there would be minimal wildlife benefit resulting from the proposed action.

There is also recognition that recreation use is affected by the remoteness of the area and many competing recreation resources. This suggests that recreation should be a fairly low priority for the area, but this is not reflected in some of the proposed management actions.

page 30: The comparison minimizes the potential effect of reduction of grazing on the area. It could well have spreading repercussions and should be reevaluated.

page 31: Affected Environment. Overview.

page 33: To properly meet the objectives of the National Wildlife Refuge System it is obviously necessary to pay at least some attention to the welfare of adjacent lands, which the wildlife using the refuge also depend upon. This fact appears to be ignored in the plan and statement, although at least some of the actions on the refuge will affect land outside the boundaries.

page 55: Recreation. Recognition of the potential effect on recreation of possible (probable) energy development is essential. Although detailed and factual information is not available, projections of what is likely are available, and potential effects can be assumed for a number of possibilities. Some of the actions taken now by an implemented plan for the CMR can have an effect on energy development through the impact of the plan on area ranching. In any case the plan should consider varying alternatives based on various possibilities of developments in the region. Gasoline prices should not be a major factor, inasmuch as there has not been that much recreational use of the CMR from any distant origin points anyway.

pages 61-68: Environmental Consequences. Alternative A. A good expression of the inadequacy of this Alternative. It does indicate some of the potential from moderate modifying of present management. For example, some wildlife - pronghorns, sage grouse, shore birds - could benefit, and better location of water facilities to disperse cattle would be even more beneficial. However, there is no discussion of a modified version of any plan.

page 70: Alternative B. Soils-Watershed. No comment.

page 71: Wildlife Habitat-Range Resources. Comment on management plans for prairie dog towns will have to wait until specific plans are released. The actual potential

for black-footed ferrets seems slight, although probably desirable. The need for control of expansion of the towns could cause problems if and when ferrets are located and introduced.

Reducing livestock grazing as substantially as proposed would benefit some wildlife species but not others. As mentioned earlier some would benefit from continued grazing. This is not made clear in discussion of the impacts of this alternative.

page 74: Wildlife habitat off the Refuge would probably decrease or even disappear if severely impacted ranchers were forced to sell out. This potential should be considered. Energy development - oil and gas, coal, synfuel, etc. - is likely in the region, and use of Fort Peck water is proposed. Such developments and related impacts are more likely if livestock operations become more marginal.

Areas having rotation systems of livestock grazing "would not have significant distribution problems." Other advantages referred to here and elsewhere in the Plan suggest full consideration of implementing such systems on a wider basis could be a valid alternative. This Alternative is proposing very light livestock grazing rather than moderate stocking, but the discussion suggests moderate grazing meets many of the stated objectives, and could reduce the severity of the impact on livestock operators.

page 77-78: Minimal consideration of the effects on wildlife of the forecast greatly increased human visitation due to improved access is provided. It may well be that such an increase in human use will not occur, because of the gasoline supply and cost situation, but if it does, a better consideration of what impact it will have on the welfare of wildlife is needed. It is suggested that increased roading and use of roads is detrimental to elk, for example. Further discussion of such factors is needed. If the use isn't going to increase, then facilities need not be built. If increased use levels are not desirable they should not be encouraged.

page 78: The "slight increase" in AUMs from 1985-2000 is illusory. It would be merely a change from privately owned land to federal ownership, and not increase livestock forage.

page 79: There is no consideration of what may happen if livestock operators are forced out of business. Although each situation is individual and privileged some general assumptions can be made, and should be. The fate of land adjacent to and outside CNR will have a significant effect on the Refuge, and various possibilities must be considered in any Plan in order to arrive at an optimum solution for the many conflicting needs and objectives.

page 81: Alternative C.

page 82: Use of "prescriptive" livestock grazing as a tool would not be the answer to habitat limitations for all species, but would only help provide some additional food and cover for specific species.

Although elimination of most cattle grazing would increase the supply of forage for pronghorn and mule deer, as pointed out elsewhere in the EIS, cattle grazing does tend to favor sagebrush, an essential for pronghorn (one of the primary species for which the area was originally set aside) and other species. This is recognized in the list of consequences, which does point out both good and bad from cattle utilization, and suggests minimal use by livestock as a partial answer.

Only cursory consideration of the impact of this and other alternatives on area ranchers is provided, as mentioned earlier in my comments.

page 86: Bison contained in fenced areas should not be considered as restoring a sight familiar in the area in the 1800s.

page 87: The section on Socio-Economics would be an appropriate place for consideration of what could be called a "multiplier effect" of the reduction in AUMs available to the local ranchers. The impact would be much greater than the direct monetary loss of the specific AUMs.

page 89: Alternative D: The increased soil erosion and reduction in quality forecast as a result of implementing this alternative is attributed, with good justification, to the recreation proposals contained in the Alternative. It would be reasonable to drastically modify that part of the Alternative, retaining much of the remainder. Such an approach should be fully considered.

page 90: It is obviously true that there would be fewer potential dens for black-footed ferrets, but unless all prairie dog towns were eliminated - not what is being suggested - it is not true that all potential dens would be eliminated.

Maintenance or slight expansion of sage communities could well be a major objective, as it would directly benefit pronghorn, a key wildlife species on CNR.

Riparian areas receiving too heavy use by livestock would presumably be fenced or subjected to other appropriate controls and undesired effects could be minimized.

page 93: Direct conflicts between recreationists and wildlife and increased disturbance of wildlife habitat by recreation developments would appear to be far more significant than any impacts resulting from livestock use. This is additional reason for a full consideration of an alternative minimizing recreational developments such as now proposed in this Alternative, but continuing livestock operations on a level approximating that proposed by this Alternative.

page 94: The reductions in AUMs proposed by this Alternative seem unavoidable when long-term range quality is considered. If livestock operations are to continue into the next century as a healthy activity depleted range condition must be overcome and rehabilitation undertaken. The benefits of doing this will over the years compensate for temporary hardship and that is preferable to continued slow degradation which would eventually require abandonment of grazing altogether, destroying any value for either livestock (and ranchers) or wildlife. It may be possible and would be desirable to mitigate the impact on two individuals (and this would be a far simpler task than to do so for the many impacted under the other alternatives).

page 97: Alternative R: It should be noted that the accumulated litter could be an extreme fire hazard rather than merely a possible one because of the frequent summer lightning storms.

page 102-103: Comments expressed by me elsewhere regarding the effects of reduced livestock grazing apply here as well, and obviously to a much greater extent.

It is clear, and is specifically pointed out in the discussions under the various Alternatives, that no one action will improve habitat for all species. Rather, each and every particular action will benefit some and be detrimental to others. If it is not possible to develop an ideal Alternative the goal should be optimum balanced benefit for all. It is important to mention human life styles of the area and to try to continue activities which over the past 100 years have been able to co-exist with wildlife. Past excesses that have been detrimental can be corrected. They have not destroyed habitat in spite of some damage. Potential changes now threatening would not be compatible with any wildlife, and this factor needs to be considered.

In conclusion, I wish to recommend development of another alternative, closer to the Multiple Use alternative described, with considerably reduced emphasis on the

expansion of recreation. A good balance between meeting the needs of wildlife and those of livestock on the CNR would be beneficial to the lands surrounding the Refuge, making possible the maintenance and improvement of quality there. This would reflect back to the Refuge and insure reasonably good conditions there too, helping to avoid the dangers which would result from excessive developments nearby. Although perhaps not ideal from anyone's standpoint, such a policy would probably be the best compromise policy and the one most likely to retain the overall quality of the region. The Refuge alone can never be sufficient to maintain the wildlife and its habitat. I believe that a modified Multiple Use policy would have a much better chance of succeeding.

I have pointed out the deficiencies I find in the Draft Environmental Impact Statement. I hope that they can be corrected in the final version, and that the management plan finally adopted will be closer to that I suggest. I appreciate the opportunity to comment and will look forward to receiving the final version of the EIS and Management Plan.

Sincerely,

Francis J. Walcott
Francis J. Walcott

Response to Francis J. Walcott

1. The development of and changes from the potential development of oil, gas, and coal in the surrounding region are only speculative at this time and are not addressed for that reason. Although actions on refuge lands can influence management on nearby lands, the refuge can only directly control refuge lands, and for that reason, management emphasis is placed on those lands.
2. Although water development would be used by wildlife, it is not necessary for most CNR wildlife species and would only serve to distribute cattle into areas now used and needed by wildlife. CNR terrain is such that very few water developments would provide good habitat for waterfowl and shorebirds.
3. The economic situation has been reevaluated and the text revised.
4. The section described the management actions that will occur in Recreational and Cultural Resources as funding, manpower, and demand warrant, providing no conflict with wildlife are apparent. It is a Service goal to provide compatible recreation on Service lands where adequate funding exists and a need has been documented. All legislation concerning the management and protection of cultural resources will be adhered to.
5. See response #2 above.
6. See revised text. Not all inholdings need be acquired for this alternative.
7. Various scenarios were considered in both the economic and the recreational planning.
8. Rest-rotation is currently being tested on a number of allotments at CNR.
9. This has been evaluated, and the FWS feels the discussion is adequate for the size of the problem.
10. This figure is based only on those lands currently held.
11. Please see response #3 above.
12. This alternative would not meet the Service and CNR objectives.
13. FWS acknowledges this.

Charles W. Weichler
1845 S. 9th St. W. #1
Missoula, Mt. 59801

December 4, 1980

Erwin W. Steucke, Area Manager
Fish & Wildlife Service
Federal Building, Room 3085
316 North 26th Street
Billings, Montana 59101

Re: CMR's Draft Environmental Impact Statement

Mr. Steucke:

In reviewing the five alternatives, No Action, Proposed Action, Intensive Wildlife Management, Multiple Use, and No Grazing, I find no truly equitable solution to the management of CMR in these recommendations. Evaluation of these alternatives has lead me to the following conclusions:

No Action Alternative:

There is "no management for black-footed ferrets, bald eagles, or peregrine falcons" included in this proposal and is in direct violation of the "special mission" of the FEIS on the Operations of the NWRS.

Multiple Use Alternative:

The Refuge's purpose is not for multiple use (FEIS on the Operations of the NWRS) and as stated in the DEIS, "would not be possible to implement unless Congressional action changed CMR from a national wildlife refuge to a multiple use management area."

No Grazing Alternative:

Under Executive Order 7509, it would be impossible to eliminate grazing. This would also be an unjust way of treating the ranchers, especially those most dependent on the refuge AUM's for an income.

The above three alternatives violate the objectives in the operation of a national wildlife refuge and are impossible to implement under present conditions. Therefore, we should not even consider these alternatives.

The two remaining proposals, Proposed Action and the Intensive Wildlife Management have some possibilities with respect to their objectives, yet they aren't acceptable as they stand now. In examining these two alternatives, I wish to highlight the appropriate objectives as well as those that are inappropriate and incorporate the suitable objectives into a new proposal.

Proposed Action Alternative:

Reintroduction of certain species listed on page 10, is allowed for under the Endangered or Unique Species Introduction section. Suitable habitat exists on CMR for these species; maintaining these habitats are essential in following NWRS primary objectives (page I-15 in the FEIS on the Operations of the NWRS).

The proposed action, "would spell out specific wildlife habitat problems and provide specific management actions to correct the problems." Yet, I find no specific problems listed anywhere in this DEIS, only general comments stating: "Wildlife habitat on the refuge is only in fair condition" with "present deficiencies in habitat" types. There is no supportive information, in the DEIS, to back up these claims.

Further more, a 33% reduction in grazing is an objective listed in this alternative, but I find no logical reasoning for this reduction from the data supplied in the DEIS. With 92% of the range in good to excellent condition, reductions, if any, would be very minimal, based on the results of the range condition survey. Although range conditions and wildlife habitats don't necessarily coincide, no specific evidence points out conflicts between wildlife habitat and range condition. Unless there were specific problems circumventing poor wildlife values, the need for a 33% reduction is inappropriate. If specific problems are pointed out then, reductions, on an individual operator basis, are made while keeping in mind the operator's dependence on the refuge for personal income.

The management for CMR's fisheries is also inadequate. With irregular water fluxuations, due to water and power demands, fishery spawning grounds and nurseries are subjected to desication and habitat reductions, respectively. Mitigation to this problem is needed. The fishery objectives listed under intensive wildlife need to be incorporated into this proposal.

I agree with the few wildlife objectives listed in the proposed action, except that it is lacking in an adequate fishery objective. Also, I cannot agree with the 33% reduction since those ranchers most dependent on the refuge will suffer an inequitable economic burden. Therefore, the proposed action alternative is inadequate and should not be considered, as it stands now.

Intensive Wildlife Management Alternative:

Under this alternative, farming would be increased to supply more food for a diversity of wildlife species, yet this is, "generally inconsistent with refuge goals." Improvement of wildlife habitat, to a degree, is permiaaible, as long as it's able to continue without additional aid -- such that once the improvement is made, it should be able to develop on its own. Farming doesn't fit this criteria because it must be seeded each spring, and should thus be phased out, except where lure farming is needed to reduce big game impacts on private lands.

In order for the intensive wildlife management action to become a reality, the few measures listed under "General" would first have to be met; this is unlikely with the new State and Federal administration.

The fishery management objectives listed are good, but the alternative as a complete package is a bit too development-oriented, will cause severe economic burden to the ranchers, and is at best a dim possibility.

Revised Proposed Action Alternative:

I agree with the proposed action alternative, for the most part, except in the areas I mentioned earlier, and would like to see the following recommendations incorporated into the Proposed Action.

Fisheriea management is lacking in the proposed action. The fishery objectives listed in the intensive wildlife man-

agement are needed and should be included under the proposed action.

Furthermore, riparian zones are usually hit hard by grazing and is an area most important to wildlife species and fishery habitat. A suggestion for a possible solution is that artificial-like riparian zones, an oasis if you will, be created on the prairies. The planting of trees around stock ponds can provide shade for cattle as well as increase nesting potential for birds. If these oases are placed strategically and the trees given enough time to mature without impacts from cattle, then some relief of grazing in riparian zones might occur. Riparian areas hit extremely hard will need grazing reductions, but after the establishment of the oasis an increase can occur. This would, in the long run, reduce the needed grazing reduction rate.

Also, the flat rate of \$1.89 per AUM isn't feasible in today's realistic world and under the 1976 FLEMA (PL 94-579), the U.S. is to charge, "fair market value of the use of its resourcea." The placing of grazing AUM's on a sliding scale, similar to that of MDSL, is needed today and I strongly suggest that this is implemented as soon as possible. The FWS then should apply the revenue from these new fees to the cost for artificial riparian zones.

If CMR's managers and ranchers work closer together and consider the above ideas, then the proposed action can be used as a basic guide line. It will mean that both sidea will have to sacrifice a bit, but in the long run it will allow for improved wildlife values and at the same time maximize grazing potential.

Sincerely,
Charles W. Weichler
Charles W. Weichler

Response to Mr. Charles W. Weichler

1. The text has been revised to indicate FWS responsibilities.
2. CEQ regulations require the evaluation of alternatives including those outside the authority of the lead agency.
3. Please see Appendix 1b and Appendix 2. Further detail is available for review in the refuge headquarters at Lewistown, Montana.
4. The FWS will coordinate with the COE and the Montana Department of Fish, Wildlife, and Parks to manage fisheries to the best extent possible, bearing in mind each agency's mission and directives.
5. This will be evaluated for the habitat management plan for each allotment.
6. The economics have been reevaluated and the text revised accordingly.

Fort Peck, Mont.
October 1, 1980

Edwin W. Steucke, Area Manager
Fish and Wildlife Service
Federal Building, Room 3085
316 North 26th Street
Billings, Montana 59101

Dear Sir,

In regards to the environmental impact statement on the Management of the Charles M. Russell National Wildlife Refuge in Montana.

We have our home on lot 35 in the Fort Peck Cabin Area, and enjoy living in the area, and we would like the continuation of the present management program (no action).

The Army Corps of Engineers has managed the Fort Peck area for the past 50 years to the satisfaction of the people of the area. The Army Corps of Engineers is located locally at Fort Peck and can be contacted readily for information and problems that arise in the area.

We do not need any management programs coming from some bureaucratic bureau or office in Billings, Missoula, Denver, or Washington, D. C.

Why are hearings held on the Fort Peck area in Missoula, Washington D.C. and other areas? I am not familiar with any hearings that have been held in North Eastern Montana regarding Flathead Lake, Seely Lake, Swan Lake, Flathead River, Clark Fork River, or other areas in Western Montana.

The citizens and tax payers of Northern Eastern Montana are quite capable of making their own decisions without any more bureaucratic bureaus or agencies.

We have lots of sunshine and fresh air in North Eastern Montana and all we are in need of is some rain at the proper time.

Sincerely Yours,

Fred G. Armstrong
Ruth H. Armstrong
Fred G. Armstrong
Ruth H. Armstrong
Box 292
Fort Peck, Montana 59223

Response to Mr. and Mrs. Fred G. Armstrong

1. The Charles M. Russell National Wildlife Refuge is a national wildlife refuge, and as such, it belongs to all the people of the United States. Many people outside the immediate area and outside Montana have a valid interest in the operation and management of the refuge, and it is proper and fitting that they, too, have some input into that management and operation.

Bozabud, MT.
November 15, 1980

Edwin W. Steucke, Area Manager
Fish and Wildlife Service
Federal Building, Rm 3035
316 N. 26th Street
Billings, MT. 59101

Dear Sir,

We object to removal of cabins from Ft Peck Lake, specifically at Hell Creek Recreation area. People in eastern Montana have no other big lake to use for recreational purposes, and several of us live too far away to just go up and boat or fish for one day. Besides we couldn't afford the gas to run back and forth. Why should we be deprived of the opportunity to have a cabin on a lake any more than people in more heavily populated states with more water. This is what it would amount to if you made us move our cabin. We'd be out our investment, because we have no place else to put it. Also, for some people, their cabin is their permanent home.

We don't see any advantage in removing the cabins in specific areas then expanding camping facilities in these areas. It seems there is plenty of area to expand camping without upsetting the wildlife.

This is such a good form of family entertainment. It's something we've all enjoyed greatly through the years, and helped to keep us a close knit family.

Fort Peck Lake hasn't been overdeveloped, for which we are thankful. We feel that there's plenty of room for wildlife, cows, and people. Let's not overdo it one way or the other.

Sincerely,

Robert and Sue Adams

Response to Mr. and Mrs. Robert Adams

1. The FWS does not propose to eliminate or reduce the cabin areas at CHR.

Box 288, South Star Route
Nashua, Montana 59248
October 26, 1980

Erwin W. Steucke, Area Manager
Fish and Wildlife Service
Federal Building, Room 3085
316 North 26th Street
Billings, Montana 59101

Dear Sir:

In accordance with the plan of public hearings, I wish to comment on the draft EIS entitled "Management of Charles M. Russell National Wildlife Refuge."

Since we have to state a preference of the alternatives, I feel the alternative "Continuation of the present management program (no action), although not entirely satisfactory, is the best alternative."

My second choice of alternatives is alternate 3, Multiple Use, although again, it is not entirely satisfactory.

The other alternatives are completely unacceptable and totally impractical.

My specific comments concerning the EIS, relating to the various alternatives is as follows:

The EIS, as a management plan has many serious flaws. The most serious one is that nowhere do we find and identify the input from the actual revenue producing users, that is, the livestock producers who pay cash leases for the grass for grazing. We have no difficulty seeing the input from the outside recreational interests. We fail to see the input from the cottage site leasees.

Another serious flaw is the lack of accuracy. As an example, the statement is made in the EIS "clarification of conflicting legislation and management responsibilities between COE and FWS would be sought. A cooperative effort with COE would be launched to determine ownership of all lands within the C.M.R. boundary. These areas are generally associated with COE purchases made in the 1930's for the Fort Peck Project and title to some of these parcels is unknown." This statement is outright inaccurate and misleading. In over 30 years of experience working with these specific lands, there has never been a time when ownership could not be determined. Lands which were purchased in fee simple had the deeds recorded in the public records in the courthouse of the county in which the lands lie. Lands withdrawn by executive order for project purposes were listed in the executive order by aliquot part of section, township, range just as all proper land descriptions in Montana are described, and they too, are recorded in the public land records in the local courthouse. The private landowners within the C.M.R. boundaries land ownership is recorded. These landowners would resent it if you are attempting to cast a cloud over their ownership. So I say, just what specific tracts of land, listed by standard description, are you talking about?

-2-

There is an audited real estate map available to you of all lands involved by purchase and by withdrawal. I was present when this map was offered to your study team, and discussed. It is not included in the EIS. This points out that your plan does not contain actual input from the people most concerned. Now in regard to the conflicting legislation you refer to. Your plan would be more creditable if you would quote the legislation that is conflicting, and show just how it conflicts. Without this, the plan leaves us with the impression that an effort is being made to confuse the situation, which is something the federal government does not need in a management plan. The legislators I am certain, would want to be apprised of this so called "conflict". Frankly, I fail to know of any conflict, either in ownership or management responsibilities that needs resolving.

Throughout the plan, the lack of specifics are apparent. This is a serious flaw. Let me list one with which every one is concerned. Under one of the alternatives the plan states "Some of the inholders (private landowners) lands will be acquired" Now which ever the inholders are, they want to know if the land they own will be acquired, what the policy will be, and what their options are. A "willing buyer, willing seller" purchase situation is suggested by the F&WL Service. The fact is, that as long as the buyer has, or can get the power of condemnation, there is no such thing as willing buyer, willing seller situation. Even without this power, many pressures can be brought to bear against the private landowner, which make the federal agency a poor neighbor, if you are the landowner. This I can relate to well, as I am an inholder in Glacier National Park.

While an effort is made by tabulation of data to show economic losses resultant from the alternatives that emphasize wildlife production and eliminate grazing, or permit grazing within limits, no real cost analysis, showing the impact on the community, the livestock producer, and Montana is readily understandable. This should be shown by graphs or charts so one could readily obtain the comparisons needed to understand. The statement is made in the EIS that a cost-benefit analysis is not required by an environmental quality council ruling of previous date. This is unacceptable, because of the fact that the alternatives given in the management plan are serious to the economy, serious to food production, and serious to people whose only livelihood depends on the leasing of the grass for livestock production. In addition, a simple table is not adequate. The data must be better substantiated to be creditable. Any management decision must weigh the costs and the benefits to be a wise decision. More specific data, I am certain, would show the folly of some of the alternatives. It cannot be stressed enough, that the management plan cannot be effective until all available facts and conditions are known. The costs of administering the plan, the incomes from all sources (not intangible ones such as "sightseeing") must be shown. None of the plans do this well. In addition, why are not management plans for intensified livestock production considered? The executive order withdrawing the lands provided for grazing as well as wildlife production?

The management plan shows the range to be in good to excellent

-3-

condition, so far as the grazing allotments are concerned in the table covering the various grazing allotments. Yet it says the range is poor so far as wildlife forage is concerned. This appears to be a discrepant statement, in view of the fact that this year the game is definitely in excellent condition, and the population trends are upward, despite two years of drought. Thus the statement regarding wildlife is apparently not well founded, but reflects more or less an arbitrary opinion.

Again, I want to stress the necessity for input from the people who are directly concerned with the C.M.R. lands. For example, I was at one time, for a short time, on a so called steering committee. Input we offered at that time is nowhere in evidence. I obtain the impression the only reason I was named to the committee was so the F&WL Service could use my name to offer creditability to the plan. It certainly couldn't have been to use the input we provided.

In summary, I want to make the following points:

A management plan, to be effective, and to gain acceptance, needs to consider all those who are directly involved in the land usage, and to involve them directly in the formulation of the plan. Outside interests certainly can have helpful advice, but the fundamental plans must come from the users. This plan does not do that, but instead is drawn up by people who talk glowingly of "mandates", and have never met a payroll themselves, do not pay taxes on food and fiber producing land, and have doubtfully ever managed a tract of land or a livestock operation for a sole source of a living. Thus the plan lacks acceptance.

The management plan needs to get down to plain every day accuracy. I have mentioned some of the inaccuracy.

The plan needs to get down to fundamentals. Raising prairie dogs in hopes a black (flat) footed ferret will appear is simply not practical. Neither is building nests for a falcon, which is included in one of the alternatives. Such considerations need to be looked at critically, for practicality. Those who deal in theory and who have only classroom experience tend to develop plans such as is mentioned, even though they can contribute other valuable items. A better, acceptable plan to the users can be made, if serious consideration is given to the above comments.

As a final suggestion, I would offer that the two plans I mentioned in the beginning as choices, be modified so as to include the items stated above. The comments are not intended to be anything but helpful.

I thank you for the opportunity to comment.

Sincerely,
D. C. Beckman
D. C. Beckman

1. The input was used from these other interests (gathered at the public meetings, letters, etc.) and is directly responsible for the Multiple Use alternative, among other things.
2. There is no intent by the FWS to cast a cloud over private inholdings on CMR. The FWS acknowledges that land titles are recorded in the county courthouse. The portion concerning landownership is confusing and incorrect and has been deleted from the text. The paragraph has been amended.
3. The text has been amended.
4. The lack of specific acquisition proposals is acknowledged; that level of detail is inappropriate in an EIS. The policy of the FWS is to acquire only lands that are needed to reach the goals of the refuge. When these parcels are identified for acquisition, a willing seller basis will be used. Although FWS has the authority to acquire lands by condemnation under very special circumstances, this authority is seldom used and is not planned for CMR.
5. The economic portion of the EIS has been revised.
6. Maximizing livestock production was an alternative that was initially considered, but rejected as being totally inconsistent with what the Congress and FWS policy have determined to be appropriate for a national wildlife refuge.
7. Range condition and wildlife habitat condition are not synonymous.
8. Please see response #1 above.

Erwin W. Steucke, Area Manager
Fish & Wildlife Service
Federal Building, Room 3085
316 North 26 St.
Billings, Montana 59101

I believe before any decisions are made in regards to the grazing status on C.M.R., a few facts about the history of our ranch should be known.

My Father, Junior Burke came here in 1909 with his family. My Father and Mother homesteaded on Missouri River and lived there until the Fort Peck Dam backed water over their land. This land was a short distance from where I live now.

The government took the land but didn't pay very much for it. They didn't pay for the mineral rights and wouldn't let my folks keep them. So you see this is not the first time we have had dealings with the Federal Government.

By cutting our grazing from 2044 AUMs to 1163 AUMs it would amount to 23 head of cattle figured on an 8 month grazing period. Figuring one half of the cows had steer calves and the other half heifer calves, that would be 61 each.

In 1979 we got \$1.12 per lb. for steers weighing 400 lbs. And heifer calves \$1.02 per lb. weighing 390 lb. This amounts to \$51,593.80 for one year. This amount would come out of the economy of this part of the country, and we believe any business man in town would agree that this amount is important to the economy of Glasgow and Eastern Montana. We realize also that this is peanuts compared to the Fish and Wildlife financial state. We live 60 miles from town and school is that far also. So it costs more to live here so we have to run enough cows to make ends meet.

The maps in the E.I.S. book do not show in one place the private and state land locations, or where the ranchers live in the area. Was it the intention of the E.I.S. to make the C.M.R. Range look like one huge roadless area, uninhabited by humans and void of private deeded land? This private land was also put under your study and included in the management for wildlife. We have had over 150 head of elk at one time on our deeded land grazing on our oat fields and grass. If the No Grazing Alternative is utilized, what are you planning on doing with the elk and other wildlife on our Private Land if we can't run cows on the CMR? It is our opinion that the preparers of the EIS were negligent in dealing with this aspect of this alternative.

On page 177 Appendix 9, we are referred to as Burke-Cabin Coulee, 15% of the range was rated as Poor and 85% was Fair to Excellent. The EIS was again wrong in not emphasizing the fact that our allotment has over 800 acres of prairie dog towns on it.

It should have been acknowledged that 15% of the range could not help but be rated with that many prairie dogs ruining the range. It also was not mentioned that the cattle do not stay in the dog towns because there is nothing there to eat.

On page 134 Appendix 1 #7 States, "Maintain habitat for and reintroduce a minimum of six pairs of black-footed ferrets on six or more prairie dog towns as soon as ferrets are available. How can you reintroduce an animal that can't be found? The last ferret was seen on the CMR in 1936, don't you think that since 1936 that at least one rancher riding through a dog town would have at one time or another seen a ferret?"

On pg. 86 Recreation and Cultural Resources Paragraph 3, Quote "Limited conflicts between recreation users and livestock would decline as livestock levels are reduced. Livestock damage to culturally or historically significant areas would decrease." Referring to sentence 1 in para. 3, in all the years we have lived here, and I daresay that the other ranchers have run their places, we have not had 1 single complaint of a cow disturbing a recreation user! The researchers that figured this one out must have been from the East where some people do believe cows are very dangerous animals.

On pg. 27 Paragraph 2 Quote "Roads to recreation areas, additional fishing access sites, expansion of some existing recreation areas, development of a scenic tour route and interpretive facilities, preservation of cultural resources and a new recreation area on Fourchette Bay are proposed for all but the No Action alternative."

Was this statement put in to put the recreationist and rancher at odds on this subject? The ranchers don't think that the recreation sites and additional fishing and the rest of the items listed are not a good idea. But the FWS is determined to make the rancher the bad guy in all of this.

Also on Pg. 27 Quote "Private land closures to public use, already a problem in the area, could be expected to accelerate further jeopardizing farmer/recreationist/state/federal relations."

The biggest problem the farmer/recreationist/state are having is their relations with the federal bureaucratic interference.

On Pg. 134 #8 Paragraph b The EIS states the peregrine falcon would be managed, protected and propagated. Habitat for nesting would not change but the peregrines' food sources would be increased as more residual ground cover is provided to enhance habitat values for such prey as passerine birds.

To justify the fact that cattle should be taken off CMR to allow more residual groundcover. A complete EIS should be done on the Passerine birds.

In Appendix 2 pg. 139-140 last para. on pg. 139 all para. on pg. 140

The EIS tends to confuse, making it seem that the same area has gone steadily downhill since 1968 & 1970 which were the only dates stated. It confuses by making it seem that the same area must have been abused by the livestock and the range management of the permittees, implying that poor range management is the reason for the sweet clover, juniper and forbs to deteriorate so badly. Sweet clover alone would naturally deteriorate if there was a good growth in a wet spring and a dry summer.

On Pg. 86 para. 3 States, Livestock damage to culturally or historically significant areas would decrease. Livestock has never done as much damage to historic and cultural sites as the burning of homesteads by the FWS on the CMR. And this is a fact that can be proven.

All of the above listings are examples of the inability of the Charles M. Russell Draft Environmental Impact Statement to show any acceptable reason for the proposed changes in grazing, cabin sites and hunting privileges.

The whole of the Draft Environmental Impact Statement is completely biased and naturally would be, being written by one selected bunch of people, with one goal in mind. That goal, being to discredit any good range management by the range holders on the CMR.

We are sure, that if the ranchers on the CMR could afford to hire range specialists and wildlife experts the ranchers could also attain the ideal management plan for their cattle and the wildlife. The same could be said in respect to the Cabin owners, recreationist, and hunter.

The only alternative acceptable to us is:
NO ACTION

Sincerely, Yours
Don and Julie Burke
Don and Julie Burke
Box 488
Glasgow, Montana
59230

C.C.: Ron Marlenee
Max Baucus
John Melcher

Response to Mr. and Mrs. Don Burke

1. With over 1,000,000 acres within the CMR boundaries, the level of detail you request is inappropriate for the EIS. There are maps available at the Lewistown headquarters.
2. You are correct that most prairie dog towns are rated as in poor range condition. However, prairie dogs are often a symptom of poor range, not a causative agent initially.
3. Ferrets are nocturnal; they are very seldom seen, even though they may be present.
4. Conflict between recreation uses and livestock often occurs when recreation users want to use an area that is being used by livestock, where livestock manure is prevalent, or where livestock damage recreational facilities or cultural resources by rubbing, trampling, etc.
5. No Action means no increased development of facilities at CMR.
6. Please see the FEIS operation of the National Wildlife Refuge System.
7. The dates you refer to are the dates of scientific publications.
8. Prior to protective legislation, the FWS did burn some sites that would now be protected; this does not negate the fact that livestock can be very destructive of historical structures.

Jordan, Montana
November 13, 1980

Area Manager
US Fish and Wildlife Service
316 North 28th Avenue
Billings, Montana

Dear Sir:

We are taking this opportunity to write our comments on the CMR National Wildlife Refuge Draft Environmental Impact Statement. Before we start on the context of the book itself, we would like to express our concern about the personnel that collected the data, made visual inspection and formulated the final outcome of this book.

We were pleased to hear that Ross and VanCleave were going to do the range survey. At least, we felt assured of a start in the right direction. But, not much to our surprise, everything started to fall apart from there. Your specialists were brought in, six people for a planning team. None of these people were familiar with the Missouri Breaks area--at least enough to do us, as ranchers or as a community, a just job for the area.

We don't believe a justified environmental impact statement was the final outcome. The range survey, done by your people, indicated a 15-20% increase in forage is now on the refuge. That is a good noticeable difference since the last survey. Your planning team leader, Dan Hinckley, talked of the increase at a public meeting in Jordan. His next statement was that, even though there is a 15-20% increase in forage, the ranchers could still be ready for a 30% average reduction on the refuge. We are having trouble convincing ourselves that there is much incentive left for proper management of the public lands on the refuge. You took the

15-20% increase and another 10-15% of what we had been licensed in the past.

Another point we are not in agreement with is the background of the people who are working the range program. If you check their qualifications, very few, if any, have a background in range management. We would not try to pin it down exactly to a percent, but everyone we have had to deal with has a wildlife degree or a background in wildlife. We don't feel this is giving us a fair shake on the refuge as ranchers. When you are required by law to write an environmental statement on a refuge this size and on something that affects the livelihood as drastically as this book has, we don't believe we were fairly represented.

We would now like to comment on the material in the book:

1. Right from the start, we are back into the black-footed ferret business. The Fish and Wildlife Service, like the Bureau of Land Management, is again managing for a species that has never been seen nor proven to have existed in this area. Again we will hold back progress for something that doesn't exist.
2. According to the book, these initial reductions are only a start. It states: "If wildlife objectives were not being accomplished, additional changes in grazing would be implemented on areas not responding." That tells us we can start with the proposed reductions and can plan on losing more or all grazing privileges eventually.
3. Forty-seven miles of boundary fence are mentioned but we can't find any place in the book that tells where any of it will be built.
4. Instead of eliminating domestic sheep use, why can't a different season of use be used to help with the competition you figure is occurring?
5. Establishing 15-20 no grazing areas is not justifiable. When

the Fish and Wildlife Service was given jurisdiction of the refuge our ranches were drastically reduced in value the very next day. If this action is taken as ranches sell, our ranches are almost worthless after the years we have spent trying to keep them as workable units.

6. It is stated that poor range condition areas are generally associated with prairie dog towns. No mention is made to try to correct this problem, other than, let the prairie dog towns get bigger. Where your survey shows livestock is the cause of poorer range conditions, you are reducing them. Why aren't you reducing prairie dogs to improve your wildlife habitat?

We have been through this type of thinking for years before the refuge was turned over to the Fish and Wildlife Service. We have had differences with the Bureau of Land Management on more than one occasion but never had to worry about total cancellation of our permits. If we have a difference of opinion on the refuge now, the end result is always the same line of thought: "We'll simply pull your permit!" We are presently in a position of either accepting whatever action they want to take or accept the fact that: "We'll simply pull your permit!" We are not trying to get rich off our CMR permit, but we are trying to meet expenses and hold a workable unit together. We believe this can be done by working together, but not when we are having the context of this book shoved down our throats or have to worry about having a place to run our cows from one day to the next.

Thank you for your time and for the opportunity to express our thoughts on the Draft Environmental Impact Statement.

Respectfully yours,

cc: Sen. Melcher, Caucus
Cong. Marlenee, Williams
Sec. Cecil Andrus

Laurence (Hoolie) Edwards

Response to Mr. Laurence Edwards

1. Although most of the refuge staff have wildlife degrees rather than range, there are almost 110 years of grassland management experience with federal land management agencies on the C.M.R. staff. In addition, two staff members have degrees in range management.
2. That level of detail is inappropriate for an EIS.
3. Numerous studies have documented major conflicts between wildlife and domestic sheep. For this reason, FWS policy prohibits the grazing of domestic sheep on Service lands.
4. Prairie dogs are wildlife and create wildlife habitat. They are a symptom of poor range condition (not synonymous with wildlife habitat condition) and not generally the cause of it.

COMMENTS ON E.I.S. OF C.M.R.

I am Francis Henning a livestock operator in and adjoining the C.M.R. I hardly know where to start to comment on the monstrosity EIS put out by FWS on C.M.R. I understand it cost approximately \$7,000,000.00. Boy, what improvements for wildlife and livestock ranchers and local people could have made with \$7,000,000.00! Interseeding, ripping, dam construction for water distribution and more access facilities.

Page VIII 2nd paragraph: "States C.M.R. is not a typical refuge." This I agree with but have you seen an adjustment of regulations to fit this condition? Obviously not, but I have seen many attempts to force regulations, which have not fit the situation made by people unacquainted with actual situation, down the throats of our local people and economic expense locally and nationally.

Page IX 3rd paragraph. "Portions of the refuge in poor range condition are generally associated with prairie dog towns or flood plains." But what has FWS done to remedy this? Nothing, in fact their plans call for an increase approximately ten-fold of prairie dogs at the expense of range conditions and which automatically requires more surveillance, labor and expense locally to keep them from private lands.

There was and is a dog town on our allotment when I moved here 29 years ago. Twice poison has been used to control-not eliminate this town. In 1951 town covered approximately 30 acres, now it is approximately 4 times as large. 4 other dog towns have started from it. I have taken visitors from other states to view this five times, but no other people have deliberately viewed it to my knowledge. No production of palatable, usable forage on 30 to over 100 acres for 29 years is rather expensive for 20 people to view for 15 minutes in 29 years; not to mention time, labor, and expense required to have kept them from expending farther than they have. One location they have tried to occupy is five miles from original town and one and one-half miles outside the refuge.

Page IX paragraph 4: "Visitor days occurred near east end near developed areas." These areas have been developed by COE not by FWS. In fact action by FWS just prior to July 1979 clearly indicate FWS desire to close out most visiting and access areas and also control water release from dam along with electricity generation. Obviously not for benefit of general public and local economy but to build their own bureaucratic empire. Please note that four of the five alternatives would increase the scope of FWS.

Page I 3rd paragraph: "Misunderstanding arises from refuge management." I must say this is a false statement. It is quite obvious FWS desire to expand their power and size at the expense of local economy, local and regional recreation and adjoining agriculture contributing to our native food supply.

Page I, paragraph 4: "A growing regional and national sentiment by environmental groups for reduction or elimination of livestock grazing." A very clear indication that majority of these groups are not familiar with actual conditions and circumstances surrounding this refuge was clearly given at the Sage Brush Rebellion informational meetings held in Miles City in July 1980. The representative of the Wildlife Federation clearly showed in his presentation he was not familiar with conditions in surrounding C.M.R. but wanted to dominate policy of FWS concerning C.M.R.

Every instance where fencing is mentioned in all plans it is to control livestock. Not one mention is made of controlling foraging wildlife and very limited mention of controlling predators. Thus leaving all damage of foraging wildlife to expense of local agriculture and also the major hunt of predator damage. At present it is only with extreme hardship can a garden be raised near the refuge and chickens for your own meat and eggs is next to impossible to keep.

OVER

Numerous mention is made of EIS to COE, SLB and how their policies and goals would have to be changed but not one mention is made of impact the loss of such policies might make locally and nation wide. All mention indicate a domination by FWS not a compatible cooperation. I am sure the dependable and consistent production of electricity alone by the COE at Ft. Peck is much, much more beneficial to our total economy than the C.M.R. would as an exclusive wild life refuge.

Page 29: These two tables are just wild guesses. Change in national or regional economy would make both charts so far out of line they would be completely worthless, current conditions indicate this is very highly probable. Table 2 does not make sense to me. For example, an increase in employment under No Action is not consistent with their statement page 8. Unless they are planning on this increase of FWS personnel.

Table 3 merely indicates their estimate in direct income to permittees at 1978-9 prices it completely ignores the age old adage that income to the original producer turns over seven times on an average before it leaves the community (taxes, interest, fuel, food, clothing, supplies, amusement, equipment, repairs and wages.) When a more accurate perspective is used it makes their final paragraph on page 30 an outright falsehood.

Appendix 9 page 178. I have lived on this ranch for 29 years and my knowledge of my own operation and adjoining ranches makes information presented here misleading and less than accurate. Nothing lower than good conditions is indicated for our allotment, and I have indicated before in regard to prairie dogs this is incorrect, and nothing has been done to correct it nor have I heard anything or seen anything to indicate that FWS will do a thing but let it continue to deteriorate and prohibit me from correcting the situation.

A dog town which apparently spread from our original town is on private lands of an absentee owner. FWS nor anyone else have done nothing to control this so there is approximately 40 acres of good land with no gainful production dominated by FWS.

Appendix 10, Page 181: If the information in total appendix 10 is like our operation and adjoining ranches, it is next to worthless. Their question for this appendix was, "How many cattle do you own?" Not "How many cattle do you graze on ranch in connection with C.M.R.?" Examples: Some people graze livestock elsewhere a portion of year, others may take cattle on shares for grazing.

After an extensive study of this appendix I would estimate impact has been toned down or under-estimated about one-third.

Our own operation, considering use by former owners before being added to our operation, has been reduced from over 450 head yearly to approximately 400 head yearly with another 15% reduction in grazing of refuge planned by FWS for 1981. There is no regulation or intention to reinstate grazing when weather conditions permit that I can learn of.

On one portion of ranch we use mostly for fall and winter we have no reliable stock water and must depend on lake for water. Fencing of the Refuge in this area requires one and one-half mile of fence dividing on private held lands. We have tried to develop water on this range and have been unsuccessful. On one adjoining ranch if Refuge is fenced on line his ELM permit would be at least 50% useless from lack of water and no chance of development. Another adjoining ranch ELM permit would be at least 25% reduced because of lack of adequate water and very small chance of

developing suitable water supply. This place changed hands in 1977 and present owner has been understocked. His grazing was reduced when he took over and another reduction is proposed at this time even though he has grazed approximately 50% since taking possession. FWS has also bothered rancher to try and have a later turn-out date, even though he was using approximately one half of graze allotted to livestock after reservation for wildlife.

Let me make it clear, I am not opposed to wildlife in a practical way and amount. But definitely again, wildlife forcing agriculture out of business at the expense and livelihood of local ranchers regional economy and our nations food supply is foolish. I like to view wildlife and hunt as well as anyone else, but there is a practical limit. The goals and regulations of FWS at present are completely impractical. I have copies and patents of lands dating from early 1900 to 1946 and not one requires us to furnish feed for wildlife. Everyone near the Refuge knows there are more wildlife outside the Refuge on a yearly basis than inside. This fact was not included in EIS that I can find, but was noted by personnel doing range survey work for EIS according to reports reaching me. Nor is there a proposal of cooperatively promoting wildlife and wildlife habitat with adjoining ranchers outside the refuge. This is another example of EIS slant toward FWS in place of an accurate picture.

The regulations of FWS do not allow for appeals on grazing infractions or alleged infractions or reductions in grazing, but does provide for stiff penalties at the discretion of FWS personnel. Therefore we have a bureau within our supposedly democratic government which wields almost dictatorial power. A person committing murder has more chances of appeal than a leasee from the FWS.

I would like to suggest a practical common sense solution. Turn the grazing control back to ELM and control of wildlife to State Department of Fish and Wildlife and Parks. Both departments are active in their own field and a cooperative program could be worked out with COE to expand recreational needs to meet the demand as far as practical. A program of ripping, interseeding and water development would increase forage and distribution of livestock and limited amount of cropping inside Refuge would attract wildlife away from private holdings outside Refuge. Wildlife supposedly belongs to the state, shouldn't the state be managing it?

I have lived here twenty-nine years and have not seen one constructive thing come from FWS. No noxious weed control, no extensive predator control, no wildlife control to prevent damage to private property or growing crops. Instead their actions have caused ranchers numerous problems and hardships hindering his livelihood and his production for the Nations food supply.

Respectfully submitted
Francis L. Henning
Jordan, Mont.

Francis Henning
Star Route 2 Box 19
Jordan, Montana 59337

Response to Mr. Francis L. Henning

1. Your figures are grossly in error; cost was considerably less than what you quote.
2. Since CMR is a national wildlife refuge, wildlife do not need to be controlled in most cases.
3. The text has been amended.
4. The economic portion of the text has been revised.
5. Animal Damage Control personnel of the FWS will provide assistance upon a request from a private landowner.
6. The question was designed to determine the percent of the permittee's total operation that was dependent on CMR.
7. FWS will not create waterless allotments or pastures by fencing.
8. FWS grazing regulations do allow appeal through the Refuge Manager, Area Manager, and Regional Director. Trespass livestock offenses are violations of federal law and are prosecuted through federal courts. Civil appeal may be initiated at any time through the U.S. court system.

1.

(Dave Huston)

CONCERNING SUMMARY OF EIS AND MANAGEMENT PLAN, on the CMR Rangeland

It is always easier to give a solution to any problem if you don't know anything about it. That is what we have here. The man they imported to run the planning team knew nothing about the country, nothing about livestock and less than that about wildlife. But that didn't make much difference as it was already decided in Washington, D.C. what they wanted the planning team to plan. This EIS is full of lies from cover to cover. They start the first page with the big one---they say the management plan of the CMR has suffered from lack of planning and conflicting jurisdiction of three agencies. The two other agencies mentioned have proved much more efficient land owners than the U.S. Fish & Wildlife. The only suffering the CMR has experienced has been since the U.S. F. & W. have had complete control. They have spent over 1 million dollars yearly & all they have done is make it miserable for the local people & livestock men. They have another big cover-up on the first page. They say they want to emphasize habitat quality & quantity rather than animal population. This statement is supposed to cover-up the fact that they have let the coyotes eat up a good share of the mule deer & a lot of the grouse & wild turkeys. On page 65 they blame the coyote kills on shortage of rodents. What a joke! A coyote always eats deer steak instead of mice if he can. Another lie on page 74 says livestock won't graze on steeper than 20% slope & not more than a mile from water but they have been doing it for over 100 yrs. already. This is just another ruse to cut the livestock or eliminate them. It seems that most of these plans are aimed at breaking all of the grazing permits & thus hurting all of the business men in the towns surrounding the CMR that we spend money with & if the livestock are cut down, it will put a larger burden on the rest of the taxpayers in these 5 counties. In their "no grazing" alternatives, they also misrepresent the figures on the effect it will have. They say the direct effect would total \$205,000.00 in an 8 yr. period. The figure would be closer to one million yearly and

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that million dollars would mostly be spent about 3 times before the money gets out of the state. Quite an affect, I would say. They say the cut in livestock would only affect the few permit holders but the overall economy would improve due to visitations. What a joke! President Carter tells people they will have to stay home more and burn less gas, but the U.S. F. & W. know already how much money will be made by people driving & visiting. Which one are we supposed to be damn fools enough to believe? From page 62 through 68 in the "no action" plan, practically every statement is false---telling all the bad things that will be if that plan is adopted. The fact remains, that cancels all of those lies & can be proven any month of the yr, is that everyone's deeded land is used a lot harder by livestock than any of the Gov't. land. It has over 2/3 of the game & birds on it & not on the Gov't. land that is used less. Every effort has been made by the planning team to arouse every Communist group in the U.S. against the stockman that has livestock on the CMR, even though very few have seen it or know anything about it. Even though this is Gov't. land, nobody's opinion but the permit holders that live around the CMR should be considered because we are the ones that are pasturing most of the game. We are the ones that winter the wild turkeys & grouse on our feed grounds & hay stacks in hard winters. Otherwise there wouldn't be enough left for seed. We are the ones that pick up the beer cans at every gate & some on the range & we are the only ones that furnish the money! There has never been any game from the CMR seen grazing on the lawns of those people that want the livestock off of the CMR. I strongly recommend the "no action" plan or the multiple use plan with absolutely no cut in livestock. The wildlife & the local economy will both be better off that way & we'll end the trouble that the U.S. F. & W. are stirring all the time. They mention that all land issues with the Corps of Engineers must be decided in the U.S. F. & W. favor, that the State Land Board has to change their policy of not selling State School Sections & private land inside the CMR must

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be acquired. It is damned odd that the U.S. F. & W. that doesn't plan to do hardly anything right, thinks all land issues have to be decided in their favor. This is just another lever to help them finally break every rancher around the CMR. I suggest that they keep their dirty fingers out of these lands because anyone can handle the land a lot better than the U.S. F. & W. plane to handle it. The game & livestock do not & never have conflicted with each other in any way. But, if the U.S. F. & W. insist that they do, & cut the livestock, we just can't afford to run the wildlife on our private land. This whole EIS & management plan is so unrealistic that one would think it was figured out by some 10 yr. old kid that had never been out of the city. The slides the U.S. F. & W. are showing at the start of these public hearings on the proposed management plan are phoney as a seven dollar bill. They show a picture of a barren range taken this summer when it hasn't rained for 18 months and say this is the way it is now. They immediately follow with a picture of tall grass & brush that was taken last year or probably the year before when it was raining a lot & had a big growth & they say this is the way we want it to be. So do all the rest of us want it to be that way & it is every year that it rains enough in this dry country. Also they show a picture of a grouse waddling along in some tall grass & they said, "we want the vegetation tall like this so the grouse have a place to dance, make love & mate". Well I have watched grouse dancing & mating for over 50 years but have never seen them dancing & mating in the bottom of a draw in tall grass. They always do their dancing on a bare hill top. Nobody else ever saw it any different. The U.S. F. & W. just will not play the game fair & will stoop to anything as this proves, in their effort to get the livestock off of the game range & break the local people financially. Twenty thousand acres of prairie dogs seem to be what they want. Don't have any, as prairie dogs ruin every bit of vegetation. They don't seem

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to care as long as livestock don't get to eat it. Two years ago they planned to develop more water holes on the range, which we were all for. We picked out the sites & they went to the expense of having engineers from Denver fly up here in a helicopter & look at the sites then all at once they decided not to develop any water so that money was wasted! They decided to let their game drink out of water holes on our deeded land & on BLM land & use the excuse of short water on the game range to cut everyone's livestock permits----some more of the U.S. F. & W. dirty pool they always play. Two yrs. ago they had a range survey made by four highly respected range specialists that cost a lot of money. The range survey looked real good except on prairie dog towns. Now, they say they will only go by the range survey when it agrees with what they want to do & the rest of the time they will do to suit their way of thinking even if it is contrary to the range survey. Evidently, they wasted that money too. People are becoming more enraged with this management plan & EIS as they find out more about how this was all planned by those inmates at that asylum on the Patonic, before hand. Meaning, the top men in the U.S. F. & W. then put on a big show of sending an imported planning team here for 2 1/2 yrs. to figure out which ranchers should have their throat cut first & to put what was already planned, into a legal looking form full of lies & phoney alibis for all these plans. Another big waste of money. They could have put what was already planned in Washington D.C. & all of their lies in that book in one month & saved 29 months wages. This imported planning team was nothing more than hatchet men for the Communist groups that want the livestock off of the range. This is the same old Dept. of Int. that caused all of those massacres, scalplings and burning of wagon trains & ranches back in the Indian days by all of their broken promises and agreements. Of course they had the help of the army & their bullets to enforce their broken agreements. Now the Dept. of Int. is doing the

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came to us ranchers that they did to the Indians. The only difference is instead of using bullets, they are using an imported planning team & Gov't. lawyers. Our Gov't. is using the theory they have been pushing for the last 4 years----divide the people into ^{hostile} groups by constantly harping on controversial matters of no importance.

Thank You,

Dave Huston
Dave Huston

Box 26

Brusett, Mt. 59318

Copies sent to:

Governor Tom Judge

Governor Elect Ted Schwinden

Secretary of Interior Cecil Andrus

Senator John Melcher

Congressman Ron Marlenee

TO BE RECORDED FOR TESTING Y
TESTIMONY OF THE C. M. R. NATIONAL WILDLIFE REFUGE

I have lived on a Ranch on the Game Range since July 1957 till date. Prior to take over of F. W. S. game was more plentiful, bigger, better and more mule deer, were found on the range. Since the take over poor wildlife management has caused deer, antelope, sharp tail grouse, bunny rabbits, bobcats and other species generally found in this area have declined. Due to a complete failure of predator management and range management and water development and other practices have failed due to lack of knowledge in management promised. Water development has gone undone, which would enhance range and wildlife alike.

I oppose the EIS as it is written and the way it was conducted and propose that it not be used in deciding the fate of the C. M. R. and if necessary a new and independent study be made.

Nowhere in the EIS on the C. M. R. National Wildlife Refuge in the names of the people and the findings that they wrote. These peoples names are: Robert E. Moss, Claude C. Dillon, Philip E. Van Cleave and Hugh Cosby, as they are specialists in their trade.

The proposed actions is making financing of some of these Units within the area very hard for both rancher and lending institutions.

All alternatives in the EIS show change including the (No Action proposal) although the no action is my personal choice it shows that the range is and will improve steadily from a range that is already in mostly good, to excellent condition.

Under the proposed alternative the loss of finances in my ranch alone due to loss of range would be 3050 net per year at present prices X 40 years or \$120,000 less interest acquired over a forty year span. This is a great loss in a ranchers life whether a manager is borrowing or loaning money. With my own personal ranch and permit the loss under the proposed alternative would be 183 A.U.'s X 40 years or 7320 aume. This would be 610 A.U.'s with taxes to the county year 1980 at 93.63 amounting to a loss of county income of 25254.30. This is on a part of the range that is 35% good condition and 65% excellent condition. There are 67 other permittees proposed to be cut more or less. This is a tremendous economic loss over a 5 county area as it also affects the towns and cities and area near and around the management area.

APPENDIX 15: Page 106: Study states (A total of 90% of all observations of livestock was within one mile or less of water). The EIS study does not state what time of day sightings were made early or late, parts of the day livestock will range further from water (which is less steep in degrees) or flatter land. Early spring and late fall or winter will also find livestock moving further back from flat lands and water. Page 21 States studies of management alternatives for wilderness and minerals have been deferred therefore the study has not been completed it cannot be correct. No mention is made in the EIS proposals about any study made on game, and condition, amount of selection before or after the F. W. S. took over management of former Game Range.

Harold L. Leasac
Rancher
Banks, Montana

SR 2, Box 13
Jordan, Mt
59337

Response to Mr. Harold Lee Leasac

1. The listing of all consultants contracted to perform various portions of the EIS is beyond the scope of the document. The names of those consultants hired are available at the refuge headquarters, Lewistown, Montana.
2. The observations upon which the slope/water matrix were based ranged over the four seasons of the year and all daylight hours. The final figure used in the matrix is an average of all observations in a particular slope class or distance from water.
3. The wilderness inventory was completed on CMR in 1974, and the proposals are now awaiting Congressional action, thus, beyond the scope of this document. The USGS minerals report for the refuge is now completed, and no commercial development is anticipated. See Appendix 16, page 222-228, DEIS, for studies cited that were completed prior to 1976.

Mr. Erwin W. Steucke, Area Manager
Fish and Wildlife Service
Federal Building, Room 3035
316 North 26th Street
Billings, Montana 59101

Dear Mr. Steucke

Enclosed are my comments of the Draft
Environmental Impact Statement for the CMR.

Alternative Plan D (multiple use) appears to be
an adequate management plan for the CMR with
the following recommendations.

(1) All wildfires should be suppressed as quickly
as possible not only in coniferous communities but at
any location on the CMR. No prescribed burning
should be permitted in any coniferous communities
due to the risk of losing valuable wildlife
habitat and natural scenic beauty.

(2) The DEIS did not address any other natural
resources other than wildlife. Under multiple use
management, water and mineral resources
should be considered in the event the nation
should have need of these resources.

Sincerely,
Bob McInerney
Bot 115
Hot Peck, MT 59223

Response to Mr. Bob McInerney

1. The EIS considered soil, water, vegetation, range, and wildlife resources; mineral resource consideration has been postponed pending departmental evaluation of the Geological Survey report.

Erwin W. Steucke, Area Manager
Fish and Wildlife Service
Federal Building, Room 3085
316 North 26th Street
Billings, Montana 59101

RE: Management of Charlee M. Russell
National Wildlife Refuge or, a
Sixth (6th) Alternative

I am writing this paper in response to the Environment Im-
pact Statement Draft. First I wonder if there is a need that
would justify such a cut or even worse a livestock change,
especially sheep, that is planned for our allotment. The draft
expresses that the Big Dry, our allotment, is 85% in good to
excellent condition and the other sheep allotment is 99% in
good to excellent condition (Appendix 9, page 178). I was told
by the range conservationist that the other 15% of my allotment
was in areas of prairie dog towns, which you want to keep. It
is with this sort of confusion that I answer your stated goals
and objectives.

After considerable thought and review of the CMR-EIS I
have come to the conclusion that the one entity in common to
all interests is vegetation. Regardless of the desired pro-
duct be it deer, black-footed ferrets, and or sheep, the
source for each is vegetation. I have also come to the con-
clusion that argument over use by varied products is irre-
sponsible and in general poor stewardship. With this under-
standing I would like to review some of the findings and con-

sequences of the EIS as I understand it and as it concerns my
livelihood. I would also like to recommend for my allotment a
specific solution which differs from the broad "proposed action".

(1) It appears from the EIS that livestock grazing (parti-
cularly sheep) is not compatible with wildlife. Of interest in
my operation is the relationship between sheep and antelope.
Severson et al (1968) indicated that sheep and antelope are
compatible while Campbell's (1970) and Freeman's (1971) data
suggest the opposite. Campbell (1970) stated that "66% of all
pasture devoid of livestock and 66% of all pronghorns were
observed in pastures not occupied by livestock. However, only
36% of the pastures not occupied by livestock were utilized
by pronghorns". Other factors for non-use of pastures were
pasture size, human activity, past grazing history and vege-
tation acting singly or in combination of different seasons.
My allotment has been surveyed for antelope five of the last
eight years by the Montana Department of Fish and Game. These
surveys indicate that 89% of the antelope sightings occurred
on land other than CMR. I believe this information demonstrates
that sheep and antelope can be compatible and that conditions
other than grazing influence antelope numbers and distribution.

(2) Because of Public Land Order No. 5635 (page 32), which
changed CMR from a range to refuge, CMR is now subject to the
special mission of the National Wildlife Refuge System. I be-

lieve this places a specific responsibility on CMR to provide safeguards for migratory birds and endangered species. As stated in the EIS prairie dog towns are of particular importance for the rare and endangered black-footed ferret. They also provided suitable habitat for unique migratory birds such as burrowing owls and mountain plovers (page 45 and 50). As shown in Figure 7 (Prairie Dog Towns) a significant percentage of all prairie dog towns with CMR in Garfield County occur on my allotment. As stated in the EIS (page 42) "poor range conditions are typically associated with prairie dog towns". Only 15% of the range in my allotment was rated as "fair", all of which occurred within the vicinity of existing dog towns. This to me, appears desirable since only a small percent of land provides a significant amount of habitat for migratory birds and endangered species. As described in the no grazing alternative (page 98), "elimination of grazing and associated disturbances would mean a reduction in the number and size of prairie dog towns. As a result it would reduce habitat for such unique species as burrowing owls and mountain plovers as well as the potential success of swift fox and black-footed ferret reintroductions". Because the proposed action of the EIS stipulates dissolution of grazing by sheep on my allotment and further mandates reduction of remaining AUM's, it seems quite possible prairie dog towns could be jeopardized. This appears to be a real possibility since under current stocking rates with sheep and cattle 85% of my allotment was

rated in good to excellent condition.

(3) I realize that the proposed reduction in AUM's may be necessary for some grazing allotments on the CMR because of dishonest operators, but I am not one of those operators. I've tried to be a good manager of my range and vegetation and have already voluntarily reduced my cattle from 320 to 70 and sheep from 1240 to 1000 in response to drought conditions. What I don't understand is the 17% reduction in my AUM's and the change of the livestock class, from sheep and cattle to strictly cattle, when 85% of my allotment is in good to excellent condition. The remaining 15% is in fair condition because of prairie dog towns which are being managed for by CMR. The broad recommendation of the "proposed action" is in reality penalizing the responsible operator as well as those who have violated grazing privileges.

For the above reasons I do not believe the broad based proposed action of the EIS is applicable for individual allotments, each must be considered separately. Because all parties, CMR, BLM, Department of Fish, Wildlife and Parks, and myself have one common interest, vegetation, I recommend a bona fide rest rotation system be established. I'm not recommending a multiple use or deferred grazing system, but instead a genuine rest rotation system that considers vegetation and the needs of all the animals that are produced from that vegetation. As an individual operator it is virtually impossible for me to exist

as a livestock operator under all the rules and laws by which the various agencies must operate; therefore, I solicit your and other agencies assistance to develop a rest rotation system which will meet the needs of all concerned.

It appears to this writer that the original purpose of the game range was for the use of livestock and wildlife together. This has worked very satisfactorily in the past. If you take livestock off of the game refuge, private land should not and could not provide sufficient range for the wildlife. It is the private land surrounding and in the refuge that now winters the great majority of the refuge wildlife.

In conclusion I feel no action is necessary, but if one of the other plans has to be implemented in order to get a rest rotation system, I must support Plan D (Multiple Use) of the DEIS.

Very truly yours,

John M. McKerlick

John McKerlick

Jordan Mt 59387

Response to John McKerlick

1. The CMR staff will work closely with the landowner and other agencies involved in preparation of habitat management plans for each allotment or group of allotments once the final EIS is published and the Record of Decision is issued. At that time, the special concerns for individual allotments, as you have expressed, will be carefully considered.

November 16, 1980

Dear Mr. Steucks

RE: Charles M Russell Wildlife Refuge
Environmental Impact Statement

I don't know why I am writing this letter to you because obviously I do not have the time, money, or resources available to me to defend our ranch against a 218 page thesis probably years in the making. I don't happen to have any trees, learned, quotes from Mueggler, Pakulak, or Peck to advance my cause either. Perhaps, I just want to clear my chest about the way I feel about the Environment Impact Statement.

When I read the report, I felt it was just one more blow to a ranching community where the tide of events has been running against us for several years. Ranchers who are cowed by the weight of unreasonable government demands such as no trepping or poisoning of predators that destroy ruthlessly 30% of the rancher's income from sheep. Demands for them to change their source of livelihood from sheep to something else for no sound reasons. Demands that the ranchers cut productivity by reducing livestock numbers when the range is in good condition. These demands are added to the already devastating burden of drought, harsh winters, low market prices, high feed costs. I secretly despair when it is the government of all people that aims to completely wipe out tax paying businessmen like us.

What defense do we have against a monolith the size of the Interior Department that makes decisions about us to cut the AUMS and eliminate sheep without even consulting us to see what kind of range management we have been following? Good range management is just good business as far as I'm concerned. The range here was rated 85% good to excellent with only 15% rated fair. Prairie dog towns caused most of the "fair" ratings and the CMR manage that. That percentage used to be a passing score. Speaking of range management, I understand that

the best method of preserving the vegetation for all animals is the "rest-rotation" method used successfully several places on the CMR and it was not even included as one of the alternatives. Why was that? Are you shooting for second best for land stewardship on the CMR?

My father started this ranch in 1907 (long before the Fort Peck Dam) and has been adding to it ever since in hopes of having a business that would support his family well. We all love it here and enjoy the way of life it brings. Now we are being told that the sheep need to be taken from us in order to protect the antelope's habitat. I wish that you would drive out here sometime in the evening. You can hardly get here without hitting an antelope with your car. In fact your 1500 antelope goal is already accomplished because there are at least that many on the refuge already according to the game warden. What I am trying to ask you is do you really think the need to protect antelope and wildlife is of such a magnitude that it merits the damage done to 60-70 individual farmers and ranchers? I think Senator Melcher said it well when he said that the CMR should do something to help both wildlife and landowners. I hope that we both have some rights. Why can't there be a supplement added to this draft statement that shows some of the studies done at Ekaleke and Coelstrip where wildlife and livestock (sheep) were found compatible. If this research paper claims to be unbiased towards all private citizens, these studies must be added. The antelope are doing fine. It is the people who are having a hard time. Since government bureaucrats enjoy doing research studies, the project that really needs to be done is one that reveals the effects of the Fort Peck Dam-CMR on the psychological life of the people who used to live here and those that still do. I would like to see data gathered about homesteaders who ventured west in 1914 to homestead land guaranteed to be their private property. I would like it told of their struggles to build homes, to tear up the sage and plant fields, and to raise families; of their hopes wiped out when the government condemned the land for the dam. I would like it revealed of the despairing people who stayed in their homes until the water entered the doors; of people like my father who were so grateful that they were allowed to stay. No study would be complete without providing case studies on the people who presently live here on the CMR. Incidents from our ranch such as my mother walking to the barn every day in the middle of winter to feed a bottle of milk to a sick ewe would be cited. Anecdotes would be told of my brother bringing in a lamb with its front leg nearly torn off by a "ceroing" coyote; of his sewing the lamb's skin back together and giving the lamb shots of medicine every other day until his ears perked up and he bounded off. The

research would have to include the daily routine of our hired men riding the "hog" of the dam to pull out cattle and sheep submerged in mud up to their nostrils because the water level of the dam changes so often. Thorough research would need to be done on the other families on the CMR showing their lifestyles and ambitions, too. Perhaps as a result of the study, government officials would see us as humans just like themselves who value their jobs and value their real estate such as homes and cabins and who would resist any force that would try to take it away from them or lower its value. Perhaps then we would not just be a number on a graph that tells how little economic effect our "petty" ranch would have on the United States as a whole. If President Carter wants to unite the country into one, how can the whole feel good when so many of its parts are hurting many times as a result of his own designs?

Let the CMR stay as it is. The range is already in good to excellent condition. The ranchers were here long before the CMR. We are not the intruder; it is the government. Wildlife and we will fare very well together if both of us are left alone. The ranchers along the CMR cannot survive without the leases. If a change must occur, I would accept the "rest-rotation" method of range management.

Sincerely yours,

Jean McKerlick
Jean McKerlick

Jean McKerlick
Jordan, Montana

Response to Ms. Jean McKerlick

1. There are several rest-rotation systems in use on the refuge at the present time. Further use is suggested in the Proposed Action.
2. In general, the research indicates conflicts between livestock and wildlife.
3. This type of information is valuable and of great interest but is not appropriate for this EIS.

COMMENT ON THE C.M. RUSSELL DRAFT ENVIRONMENTAL IMPACT STATEMENT
BY LYLE NELSON AND DARLYNE DASCHER, SOUTH ROUTE, FORT PECK, MONT.

I find the environmental impact statement totally inadequate in dealing with the changes that would take place in the communities surrounding CMR. It appears to me that the government bureaucrats have opened up a can of worms that should best be left closed. Why do the people of eastern Montana have to have action crammed down our throats by sportsmen and environmentalists in such places as Missoula, Montana, clear across the state, and Washington, D.C. clear across the country? Ranchers have struggled and made a meager living in many cases only to suddenly have book learned experts telling us how to run our business. If all the ranchers were as stupid as the range experts and environmentalists make us out to be we would have been out of business long ago. A rancher appreciates and has a deep respect for the land--his entire livelihood depends upon it. There may be a few abuses of the range but they are few and far between.

I submit that this EIS is not a format of alternative actions but is a cleverly conceived plan to totally eliminate grazing, hunting and all types of recreation. With five alternatives being offered I cannot believe for a minute that the CMR is going to be swayed from its ultimate goal--NO GRAZING ON CMR.

I would like to express my comments to some of the statements found in this report.

Page viii "Although varying quantities of oil, gas and coal are known to occur beneath the rugged landscape, these and other energy resources have a low to moderate potential for development." With the energy crisis upon the U.S. today why do we have to sit upon such a vast area of natural resources and never use them? The land adjacent to the CMR is in great demand for oil, gas and coal leases.

Page ix "No threatened species of animals are known to occur in the refuge." Therefore why should such endangered species as peregrine falcons, bald eagles and possibly black-footed ferrets be introduced? The CMR as it is currently called, was originally established to provide a habitat for sharp-tail grouse and antelope by President Franklin D. Roosevelt in 1936. It appears to me that by introducing these endangered species the CMR will become a prime candidate for a wilderness area which we certainly has no use for.

Page i Under Proposed Action Alternative, "Significant management actions would include reduction in livestock grazing as well as changing existing livestock seasons of use and modifying existing grazing systems to benefit wildlife." I do not understand the managers of CMR thinking that can delay the ranchers use of grass on the CMR and for the rancher to still survive. A student

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in elementary school realizes the short and limited grazing or growing season to this area. This appears to be just another subtle approach by the CMR to put the ranchers out of business.

"Farming along the Missouri River would be phased out but some lure crop farming would be implemented to decrease elk depredation on private lands." In discussions with personnel of Fish and Game as well as other individuals, they all state that it will be impossible to keep elk, deer and antelope off private land and fields. Perhaps the CMR personnel are going to teach these animals to read a map and obey boundary lines!

"Federal livestock AUMs would eventually be reduced 33 percent below levels presently authorized to achieve a light grazing level determined to be consistent with wildlife objectives." How many of you could take a 33% cut in our pay and still survive. In many cases the percentage cut on an individual is closer to 50%. These ranchers face a very grim prospect of being forced out of business by the CMR. Do the wildlife pay taxes or feed the American people? No! The ranchers do.

"Some inholdings would be acquired and ownership of all lands within the CMR would be escheated." Does this mean they are going to condemn private lands? I always thought the constitution gave all individuals the right to earn a living in an honest and forthright manner. How do you rationalize taking away of private lands and livelihoods as being a standard of U.S. democracy? This type of action speaks very loudly of Russian tactics. All ownership of lands within the CMR can be very readily escheated by making a simple trip to the courthouse in the county in which the land is situated.

Page xi Under the Intensive Wildlife Management Alternative you state, "Some prescribed burning would occur in Garfield county and on the west half of the refuge." Is the rancher supposed to stand by while he watches good grazing ground burn up just so nature can have her way? If we did nothing to improve our relations with nature we would still be as primitive as the oilman fathers. I for one would like to think we had improved our lot in life through careful management not reckless burning of lands. Who is going to stop this fire from burning private lands once it starts? If you think you can draw a line and tell the fire to stay behind it you are either very naive or have never fought a prairie fire.

Under the Multiple Use Alternative it states, "Livestock would receive approximately one-half the allocated forage." This is very poorly worded as far as the rancher is concerned. Who is going to determine the exact amount of forage available? I can not believe the rancher will have any voice in this action.

Page xii Under No Grazing Alternative you state, "All private and state inholdings would have to be acquired before elimination of livestock grazing would occur since most of these areas are unfenced and stocked by the operators at carrying capacity levels."

-3-

Again I ask, are you going to condemn private land? The CMR takes the position it does not dictate what you can do with your private land but it does! Whenever any private land is inside the CMR boundary we are told exactly how many head of cattle we can run inside the CMR and if we don't like it we can just go jump in the lake.

Instead of the signs around the refuge stating "No Vehicles Beyond This Point" or "Authorized Vehicles Only" I would like to see signs saying "No Government Bureaucrats Beyond This Point."

Page i The EIS states, "FWS changes in grazing practices have resulted in distrust and uncertainty of CMR goals by the livestock industry and federal and state agencies." Who has caused this problem? It sure hasn't been the ranchers, hunters, fishermen or the recreationist. It appears to me the problems have all been caused by the attitudes of the CMR managers and employees. I for one am getting sick and tired of traveling great distances to attend public input hearings only to have all of the public input ignored! It looks as though the CMR bureaucrats are going on with their plans with only a token of notice paid to the people their high and mighty decisions affect.

Page 3 Under Alternatives the EIS states, "plans for managing 15 proposed wilderness areas comprising approximately 101,000 acres on CMR will be developed after Congressional action on these areas is taken." We don't want nor do we need any more wilderness areas in Montana. Let's keep this land open to the public for all of us to use, not shut away by some congressional order. Why should the West be used constantly at the expense of the people who live here? I am getting sick and tired of the oil companies, gas companies, coal companies, electrical companies, you name it, wanting our natural resources so it can be shipped out of state to benefit some other part of the country. Why should the West have to make the sacrifice for the people of the rest of the country to have a play ground? Let's leave the area as it is so it can help pay its way in today's high inflation and tax burdened people.

Page 5 Under Wildlife objectives, "Maintain viable prairie dog towns covering between 5,000--20,000 acres on suitable areas with sizes and patterns desirable for black-footed ferrets." Why on earth do we need 20,000 acres of prairie dog towns when there has not been a reported sighting of a black-footed ferret in 25 years? If CMR managers feel they want to improve the range conditions for wildlife in particular they should visit a large prairie dog town. A jack rabbit will pack a lunch with him when he starts across. I don't necessarily think all prairie dogs should be done away with but I sure don't see any need for even 5,000 acres of them.

I could continue to pick apart this EIS but a feeling of saving paper and time prohibits me from any further lengthy discussions of this matter.

-4-

I again state that it appears to me the CMR bureaucrats intend to implement all five of their plans rather than give the people a real choice.

If the CMR managers really wanted to work out a comprehensive plan why don't they include everyone concerned with their actions into the planning sessions? On page 104 you list the people responsible for drafting this all important statement yet I don't see a single rancher, a single mayor of towns surrounding the CMR or any cabin owners or recreationists, no hunters or fishermen--none of the people directly being effected by this statement have any input. I think it is time we get back to the founding fathers of a government of the people, by the people and for the people.

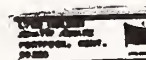
Respectfully submitted,

Lyle Nelson
Darlynne Dascher

All quotations are taken from the Draft Environmental Impact Statement by the CMR, dated August 1980.

Copies of this statement is being sent to the following people.

Erwin W. Steuoke, Area Manager of CMR
Senator John Melcher
Senator Max Baucus
Congressman Ron Marlenee
Congressman Pat Williams



Response to Lyle Nelson and Darlyne Dascher

1. The Endangered Species Act makes a distinction between threatened and endangered species. Peregrine falcons, bald eagles, and black-footed ferrets are endangered species. Peregrine falcons and bald eagles presently use CMR during some seasons of the year, but do not now nest on the refuge. Reestablishing endangered species populations is a high priority FWS program.
2. The purpose is not to keep these animals off private land but to reduce or alleviate crop depredations.
3. The FWS does not propose to condemn private lands.
4. All burning will be in accordance with a fire management plan. Burning has been shown to be an effective vegetation management tool.
5. As a result of continuing surveys and research, FWS now believes that CMR should not support more than 10,000 acres of active prairie dog towns. The text has been revised.
6. This is the list of the people who actually wrote the EIS, not those who provided input.

To whom it may concern:

First of all I am a solid believer in multiple land use on the... C.M.R. I am aware of the fact that there have been many complaints as well as suggestions sent to you as of this time. I also believe that no one knows more about proper land use than the ranchers themselves. For instance, the private landowner has a larger supply of wildlife, many times better range conditions, and a better relationship with people in general. This doesn't come from cutting down on his livestock numbers or telling people what they cannot do. It comes from plain common sense. Proper water distribution, rodent control, necessary hunting regulations, are common sense. These things the rancher didn't learn from some know it all professor in a famous college, he learned it by living it.

One of the most important issues that I haven't heard mentioned yet is winter grazing. On land that hasn't been grazed during the winter, there is on most years a surplus of old grass left over in the spring. Whether you people realize it or not this creates a real fire hazard! The idea that wildlife use this grass to any extent in the winter time comes from someone who reads the wrong book. I have lived in the country all my life and have seldom seen deer, elk, or antelope eat grass after the grass starts to cure and harden in the fall. The things these wildlife do eat during the winter a cow does not.

So what my letter boils down to is that proper land use on public lands should be decided by the most highly qualified personnel, THE RANCHERS!

Sincerely

Jay Nunn

Winnett, MT
59087

Response to Mr. Jay Nunn

1. Winter grazing is presently occurring on areas of CMR and will be utilized in the future. Ample forage remaining after livestock have grazed an area is essential for wildlife cover. The Service acknowledges that this requirement may have some effect on fire size and intensity.

Malta, Mont
Dec 4, 1980

Erwin H. Steucke, Area Manager
Fish and Wildlife Service
Federal Building, Room 3035
316 North 26th Street
Billings, Montana 59101

Dear Sir,

The FWS put out a Draft Environmental Impact Statement on CMR this fall that misused the taxpayers money. The statement did not present any good management alternatives. Now did this statement indicate that the FWS had done a good job of gathering information to present to the public a valid and true picture of the conditions on CMR. Neither did it present valid recommendations for the improvement of CMR.

The FWS has not done a good job of managing the CMR since their take over in 1976. They have tried to circumvent Pres. Roosevelt's explicit executive order that created the Fort Peck Game Range that was

later changed to C.M.R. Res. Roosevelt created the refuge for sharp-tailed grouse, antelope, and the grazing of livestock. The executive order specifically prohibited the phasing out of livestock grazing. The livestock grazing is to remain to maintain a balance on the refuge.

The number count of ^{wildlife} is not to be maintained by an overabundance of prairie dogs. The grasslands of C.M.R. has not been properly managed. The FWS has allowed the range land to become infested with prairie dogs. These prairie dogs are not good for the land even if the FWS does find some black-footed ferrets to plant on the thousands of acres of wasted land in the prairie dog towns. The president's executive order specifically says there will be no predators introduced on C.M.R. The black-footed ferret is a predator.

Coyotes, bobcats and badgers are also predators. The FWS is illegal when these predators are allowed on C.M.R.

The FWS has not stayed within the "intent" of the executive order and wanting to introduce another predator, the black-footed ferret, is deliberately going against Roosevelt's executive order.

This rangeland on C.M.R. is cattle grazing land. This grassland can support the wildlife and the livestock with proper management on the part of FWS. This land can not be turned over to the prairie dogs and the predators.

Wildlife will move off the C.M.R. if they have to eat off the old grass to get to new green grass. To burn the old grass off is a pure waste of grass and more money. The wildlife will move on to private land to graze the grass in complete compatibility with livestock. No fence, no matter how strong or how high will hold the wildlife on the refuge. And to build & maintain a fence is unfeasible moneywise & work hours wise.

The C.M.R. needs the cattle grazing to full fill the "intent" of the executive order that created it and it needs the livestock to maintain the balance on the C.M.R.

This D.E.S. was made to determine the impact of grazing but it almost totally ignored grazing and how much good it, the livestock grazing impact, has on maintaining the balance of nature on the C.M.R.

Thank you

Wesley & Marilyn Orahood

M. Orahood
M. Orahood
8-1178-54538

Response to Mr. and Mrs. Wesley Orahood

1. Please reread Executive Order 7509 (Appendix 4); predators are not prohibited, rather they are not mentioned.

November 28, 1980

Dear Sirs:

We would like to comment on your CMR MIS draft. First of all we want to say that we are definitely against this refuge being made into a wilderness area and are for the NO ACTION proposal. We do want our 50% back that you owe us for two years for no reason since Flint's didn't use the CMR at all in '78" and only half the sum's in '77". If all us ranchers inside and out of the Boundary have to take you to court to save our homes we will.

I hope you get sued for this book because you plan to take peoples homes and you even claim dedeed land. (I can't wait to watch this case). Your not going to get our home for any amount of money. Your trying to pull a Hitler trick and I hope people aren't fool enough to let you succeed.

CMR, BLM, hunters, environmentalists and Easterners always try to blame ranchers for poor land condition (gumbo will never produce) and fewer wildlife but nobody cares for this land more than ranchers because its our home. We worry more than anyone about it and all you and hunters etc. worry about is wildlife and using the land. We use it to make a living and at the same time take care of it. For two years the country has looked awful because of drought so you and BLM do your MIS's, then say ranchers overgraze. The reason theres no grass is because it hasn't rained enough the past two years to make grass.

The reason your deer and antelope decrease is because their overhunted and hunting season is during mating season. Not only that but only dumb little bucks are left and bucks are scarce as compared to the amount of does (owned by your buck only tags). Your coyotes eat the fawns because you won't let us control them. Your damn prairie dogs (which you protect and plan to increase) wreck millions of acres of grass. Cattle, wildlife and ranchers have done great together for hundreds of years and nobody had problems until CMR came along.

On pg. 87 of your MIS draft you write "private landowners outside the Boundary would be expected to receive increased demand from recreationists to hunt or travel dedeed land" if you make the refuge a wilderness. If that isn't communism I never

pg. 2

heard off it. First of all we ranchers inside the Boundary are not going to let you have our homes or wilderness and people outside won't and don't have to take in people you've run out of the refuge. Your also not going to be allowed to eliminate homes, cabins and the town of Port Peck etc. as you say on pgs. x, xi, 18 and 19. I really hope people sue you for trying to run their privets land inside and out of the refuge. On pgs. x, xi, xii, 9, 11, 18, 19, 24, 26, 84 you plan to acquire dedeed land inside the refuge and say you'll condemn some to get it. Just try it you because you'll create Civil War no. 2.

This summer (fall) we were told by some of your officials that if we didn't let hunters cross our dedeed land to get to your damn CMR, you'd close CMR to us and we'd possibly lose our permit. That is blackmail and from now on we don't allow anyone to go North of us because for 2 years they trespassed our neighbor even though they were told not to. One trespasser was Glenn Guenther of Port Peck and he said he worked for you this summer. That shows how rotten you are's are.

I pray to God that the people, Senators etc. are smart enough to stop this wilderness and all others because its communism and wildlife are not as important as people and their homes. We like to see wildlife but when it comes to losing our homes, we wonder.

I hope that in a year or less we can wipe CMR off the map as far as control because we are trying to make an honest living and a home for our family but can't because of government.

On pgs. 27, 74, 83, and 99 you are worried that ranchers would overstock their dedeed if their cut by CMR. Well, let of all if they did it ok because its their land not yours, and 2nd of all they wouldn't because they'd be the ones hurt the most. Ranchers aren't the dumb are's you want people to think. You say on pgs. 27 and 30 that putting ranchers out of business wouldn't hurt the economy and you give false figures. It would drastically hurt the economy because there would be fewer acres of agriculture and production of wheat, beef etc. and the ranchers keep towns like Jordan, Circle, Miles City etc. going because they spend their money there. You would also be hurt because you would no longer receive money for grazing and your damn wildlife have no money.

pg. 3

Ranchers pay the most taxes of anyone because they have more property so that would hurt the economy and the country. If ranchers get put out of business there will be no food. In your book you plan to make sheep ranchers run cattle. This is discrimination because people should be able to run what they want to and not only that, without sheep there will be no wool.

Fish and Wildlife Service thinks they can confiscate bobcat pelts if the person doesn't bring the carcass and have it in "good" condition just so they can do a damn lab test on it. Your going to get in a good lawsuit over this because these people have a treppers permit and theres no law saying you have to bring the damn carcass. Not only that but most bobcats will have been caught on dedeed land so that makes it worse for you. You think you own wildlife but you'll find out you don't, they own themselves.

When we get our grazing permit from you it always has the wrong period of use than we'd like to use and we'd like to use CMR one spring and BLM the next so they'd both get a rest. You won't go for that so don't say ranchers aren't trying to manage their place the correct way because we do try, its CMR that won't allow things. For example, you harm the land worse than anyone because you won't put fires out and keep us from managing it right. In places letting a fire burn is ok but not on good grass land.

Why couldn't you simply write us a grazing permit each year according to how it would work with BLM and we then collect your grazing fees and let us run the land properly? We don't harm the land and nobody had any trouble until your strict rules came along and you start saying you'll take our homes and sum's away. People around here can take each others word and know its good but we can't even depend on your signature on a legal paper. We didn't have half as much problem with hunters either until you made people think ranchers were out to ruin the public land and kill off the precious wildlife. Its been the past five years or so that ranchers and hunters had problems and its not us that caused them.

pg. 4

Do you know there are not any overgrazed allotments on the "Big Dry Arm" area, they are simply droughty areas. On pg. 74 you say "there are overgrazed allotments in the "Big Dry Arm" area. On pg. 89 you say under Multiple Use proposal that "decreases in sum's would occur primarily in the "Big Dry Arm" area where most serious range condition problems occur". The only range condition problems we have here are here to stay because its gumbo and they'll never grow anything.

Pg. 74 says "there are poor qualities of sagebrush stands". By God you'd better get glasses because sagebrush is so thick in Harby country that it is one reason grass can't grow.

When the Port Peck lake was put in people (ranchers) tried talking the gov. that they were taking the best land out of production but they wouldn't listen and now they try saying ranchers took "riparian areas" away from the wildlife. Now, CMR comes along and wants to do away with ranchers-the only smart people here.

Pg. 85 says "it would take 40 years of complete rest and 25 inches rain annually to make range excellent". That would mean you'd also have to keep your wildlife off it which you'd never do but you will force livestock off. It looks to me like your whole book is a pack of lies with no facts to back it up, especially when it doesn't take five years to make range excellent if you get rain. You and your range specialists must have had a great party when you did this MIS.

Ranchers always have deer and antelope in their alfalfa and other fields and they stay with the cows for protection from coyotes, and they don't stay in the pastures we just took our livestock off of or haven't even turned into all that year. If you close your refuge to everything but wildlife, ranchers will no longer allow wildlife to take a free meal from their land and they'll leave them lay. I hope this world wakes up pretty soon and eliminates CMR, BLM, environmentalists etc. before nobody has a home.

Why does your Boundary go around so as to include dedeed land like ours for example instead of leaving dedeed outside? Congress did not set up the Boundary your trying to use. Also tell me why there were CMR signs put on our dedeed land and others.

pg. 5

We know you plan to "price us out \$ per acre" but you won't succeed because there's no way we'll let you win. Tell me why Coleman Murnion got Bob Miller's CMR in his name without it being advertised. We had to have ours advertised at least 2 months even though we'd bought this place. Looks to me like there was something illegal here.

We're for "Sagebrush Rebellion" in a revised form--ranchers get grazing rights ~~forever~~ and hunters etc. can use it also so long as they let the rancher know who is on his leased land because we're responsible for its condition. We can't and won't let gov. win every wilderness because if we run once they'll run us out elsewhere someday! Just look how many good lands gov. has ruined and taken out of production plus taking peoples homes. Agriculture is the backbone of this world and without it there's no food, clothes etc. and no wildlife either because towns take over. Sure wish the damn lake and CMR had never existed.

Well, enough of that since you won't read this letter anyway, you'll just write in the Final Draft that "all letters were in favor of the CMR becoming a wilderness so from now on there will be no more grazing and all private land inside the Boundary will be taken". We've been thru the BLM EIS and that's what they did. I know all letters weren't for the proposed wilderness areas because us and our friends wrote letters against them.

Remember, in your Final Draft you'd better say we're against your whole damn refuge period and want to run it correctly without gov. interference.

Your endangered species--
Ranchers,

Clay Taylor
Karen Taylor

Mr. and Mrs. Clay Taylor & J.C.
Star Rts. 1 Box 22
Jordan, Montana

59537

Response to Mr. and Mrs. Clay Taylor

1. The boundary of CMR was established by Executive Order.

Brusett, Montana 59318
December 3, 1980

Area Manager
U.S. Fish and Wildlife Service
Room 3035
Federal Building
316 North 26th Avenue
Billings, Montana 59101

Dear Sir:

I am writing in regard to the E.I.S. on the Charles M. Russell Wildlife Refuge.

It would seem to me that there are several false statements in this E.I.S. such as, "the effects due to grazing changes on the C.M.R. would be insignificant under any of the alternatives", (pg.30). On page 29 it states: "Reduction of 32.4% is a reduction of 19,479 head." This constitutes a very real economic burden, not only for the ranchers involved but for the towns that rely on agriculture for their livelihood. It is also an added tax burden for the other people of these counties.

Rather than cut the grazing on the Charles M. Russell it would seem much more sensible to develop the range with water such as wells, reservoirs, and springs so the cattle would spread out and not create the problems that the Wildlife Refuge mentions in the E.I.S. which largely do not exist. So, therefore I opt for the no action alternative.

Thank you,

Mike Pierson
Mike Pierson
Brusett, Montana 59318

cc: Ben Marlanse (Rep)
John Melcher (Sen)

Response to Mr. Mike Pierson

1. The regional economic effects are insignificant because the relative change on the six county area is a very small percentage change. Thus, to the region, there would be no perceptible change in key economic variables such as employment or income as a result of these alternatives. The absolute effect to a few individuals, as measured without reference to the size of the six county area, may be large. While this change is important to these individuals, it does not seriously affect the human environment of the study area because the absolute changes have a small relative effect.

November 12, 1980

John Trumbo
Jordan, Montana 59337

Erwin W. Steucke, Area Manager
Fish & Wildlife Service
Federal Bldg., Room 3035
316 North 26th Street
Billings, Montana 59101

Re: Draft Environmental Impact Statement on the Management of
Charles M. Russell National Wildlife Refuge

Dear Sir:

I am a rancher residing north of Jordan, Montana. I am one of the ranchers who will be directly effected by the proposed action as set out in the Draft Environmental Impact Statement on the management of the Charles M. Russell National Wildlife Refuge. For the record I would like to make sure that the following objections to that Draft Environmental Impact Statement are noted:

1. First of all I object to the reduction of my CMR AUM's. It seems to me that my reduction is very disproportionate to the reduction made to other land owners. You will note on page 178 of the DEIS that my allotment on Browny Butte indicates that the range condition is 76% excellent and 24% good. You will also note that I have the second largest amount of excellent range condition subject only to J. Matovich at Fourchette Creek. You will also note on page 160 on the Browny Butte allotment that the total AUM's will be reduced from 642 AUM's to 202 AUM's in 1985 under the proposed action alternative. This decrease in total allotment would amount to a 68% decrease. In light of the fact that my range already appears to meet the goals set out in the DEIS, this 68% reduction seems to be especially unfair. I would first of all ask that your office check and make sure that there has not been a mistake concerning this decrease. Secondly I would request that if there has not been a mistake, would you please send me a copy of the reasons for the large reduction in my AUM's. I would like to make sure that the range survey which was done in 1978 took into account the three reservoirs located on my portion of the CMR. In fact it is not over 1 1/4 miles to water from any given point on the CMR land on my ranch.

2. The proposed action as set out in the DEIS seems designed to attain a goal which is not provided for in the Mission Statement and Long Range Goals for CMR as approved by the FWS Regional Director in September, 1978. These goals are set out on pages 4 through 6. There is no doubt that the basic goal associated with the CMR is to provide suitable wildlife habitat for a reasonable number of wildlife. However there is nothing specified in the DEIS which would indicate that there is a problem currently in the CMR in terms of a lack of

Erwin W. Steucke
November 11, 1980
Page 2

numbers of wildlife. Secondly it is interesting to note that the basic effect of the proposed action seems to be to increase the wildlife AUM's from the current level of 50,000 to 69,000 AUM's in 1985 and 74,000 AUM's in the year 2000. There seems to be no clear justification as to why there needs to be this increase in wildlife AUM's. The main thrust of the DEIS seems to be to the effect that the range conditions of the wildlife habitat are not in good shape. However there is nothing in the DEIS which would indicate why it would be desirable to increase numbers of wildlife or even whether there is an inadequate number of wildlife currently on the refuge. There seems to be no justification given for increasing the wildlife AUM's to 74,000 by the year 2000.

3. The proposed action would also not meet the basic goals of the CMR in terms that it will not have a significant effect on the numbers and types of wildlife on the refuge. The basic theory of the DEIS seems to be that by increasing the quality of the habitat, there will naturally be a big increase in wildlife populations on the refuge. The most amazing thing about this theory is that the DEIS fails to take into account the affect of predators on the wildlife populations in the CMR. On page 74 concerning the consequences of the proposed action, it is indicated that impacts from predators and animal control would be the same under the proposed action as the no action alternative. On page 65 under the consequences of the no action alternative, it is admitted by the drafters of the DEIS that coyotes do have an effect on certain wildlife populations. Again it seems very amazing to me that the DEIS would totally refrain from addressing itself to an issue which has such an effect on wildlife populations when that seems to be the biggest goal behind the management of the CMR. It is my position and that of almost every other land owner on the CMR that the predator element is the biggest single cause of wildlife losses on this refuge. It is also my position that the increase of the quality of the habitat with no program for the control of predators would have very little effect on increasing the wildlife population on the CMR and therefore the proposed action would fail to meet its biggest single objective.

It is also interesting to note that one of the biggest ranches in Garfield County is owned by Mr. Benny Binion which contains very large amounts of CMR within its boundaries and is in a generally under-stocked position. Even though Mr. Binion's ranch is generally without stock or has very little stock on its ranch, the condition of the range in terms of the DEIS has not increased that rapidly. It is also interesting to note that my personal observations have indicated that there does not appear to be any more wildlife within Mr. Binion's ranch than in any other part of the refuge. Again Mr. Binion's ranch would seem to be indicative that the objectives of the proposed action would not be met.

Erwin W. Steucke
November 11, 1980
Page 3

Finally it is interesting to note on page 65 that the DEIS admits that coyotes cause economic loss to ranchers. It would appear to me that the most direct consequence of the proposed action would be to provide a breeding ground for coyotes. This is due to the fact that livestock numbers would be cut by 1/3, that no sheep would be allowed and that the current predator programs on the CMR are inadequate. This would have a very big effect on the land owners within the CMR and also on the off-refuge ranchers. The problem of coyotes migrating off the CMR range in the past and killing livestock has been a very big problem and it seems fairly clear that the proposed action and the policies of the Fish & Wildlife Service will do nothing but exacerbate this problem. It would also appear to me that the Fish & Wildlife Service should be liable for their policies which seem to encourage the increase in coyote populations when these policies cause such an economic loss to ranchers both on and off the CMR.

4. It is also admitted in the DEIS on page 79 that the proposed action will have high adverse impacts on at least six livestock operators. I have estimated that the economic loss to my livestock operation from the proposed action would be between \$12,000.00 and \$15,000.00 per year. With the severe economic conditions that have affected my ranching business in the past two years, this type of loss could be catastrophic. This decrease in AUM's plus the increase in predator numbers will make it very difficult for me to continue in the ranching business.

It is also estimated on page 78 that there would be a direct loss to the CMR of \$134,000.00 from the 33% reduction of AUM's. This loss to the CMR will undoubtedly have to be made up by the Federal budget and would appear to be another example of the inefficiency and extravagances associated with the federal bureaucracy.

5. It is also interesting to note that the DEIS does seem to be concerned by the attitudes of the land owners towards the management of the CMR. Specifically the DEIS talks about the adverse land owners attitude towards the introduction of certain types of wildlife including elk and Rocky Mountain Bighorn Sheep. I would submit to you that the proposed action as stated in the DEIS will seriously alienate every major land owner on the CMR and will most likely critically jeopardize the introduction of any new species of wildlife. It seems to be another good example of the policy of the Fish & Wildlife Service to work against the rancher on the CMR rather than to try and work with him. As a practical matter the Fish & Wildlife Service has to work with the land owners on the CMR but this is a fact that they refuse to admit.

Erwin W. Steucke
November 11, 1980
Page 4

6. I would also like to point out to the drafters of the DEIS that many of the objectives of the proposed action could be met by addition cross-fencing and the development of further water projects. One of the biggest problems on the CMR in terms of poor habitat conditions is the fact that livestock grazes heavier the closer they are to water holes. It would seem logical that this problem could be reduced by simply increasing the numbers of water projects and also by using fences to manage certain areas of habitat.

Overall it is my conclusion that not only will the proposed action not meet the desired goals of the CMR but that it will have serious adverse effects in terms of predator problems and economic losses to the ranchers involved. There also does not appear to me to be any need for the drastic reduction of livestock AUM's by 33%. It is my opinion that the no action alternative would allow the Fish & Wildlife Service to continue to meet the goals of the CMR without any of the disadvantages of the other alternatives. I would also suggest that the allowance of increased predator control on the CMR would have a much more direct impact on wildlife numbers than any of the alternatives mentioned.

Sincerely,

John E. Trumbo

John Trumbo

JT/cm

cc: John Melcher
Max Baucus
Ron Marlenee
Pat Williams
Sec. of the Dept. of Interior

Response to Mr. John Trumbo

1. You have been contacted by the CMR staff regarding these matters.
2. Evaluation of wildlife habitat in the initial portions of the EIS process showed some serious shortcomings in the quality of wildlife habitat (see Appendix 2). The shift in wildlife AUMs will improve this habitat. CMR is a wildlife refuge, and wildlife receive highest priority. This is stated in the Executive Order establishing CMR and in the Refuge Administration Act.
3. The FWS acknowledges that predators may influence other wildlife populations. However, the FWS recognizes that predators are wildlife also and are important in natural management. The policy of the FWS is not to engage in animal damage control for the benefit of other wildlife species. High quality habitat will support more wildlife than mediocre habitat even with relatively high predator populations.

December 2, 1980

Snap Creek Ranch
Twitchell Brothers
Jordan, Montana

Erwin W. Steucke, Area Manager
Fish & Wildlife Service
Federal Building, Room 3085
316 North 26th Street
Billings, Montana 59101

Re: Management of Charles M. Russell National Wildlife Refuge.

Dear Mr. Steucke:

I am writing this letter in response to the Environmental Impact Statement Draft.

First I would like to say I am opposed to each and every one of the plans that you have come up with. There is no way a rancher could live with any of these. If you were honest with your plans you wouldn't have a required cut in A.U.M.'s or total reduction in every plan.

Why not a rest rotation system that has been working for the B.L.M. for some years. Anyone could come up with a reduction in A.U.M.'s to increase forage. The people that were supposed to do this draft are supposed to be highly educated people. This does not show planning or study other than to do away with the rancher. A direct cut is the last resort that should be used.

These proposals that you have made were suggested and made by college people from all over the country except here. Some local input should have been asked for. It took a special kind of person to settle and make a living in this land. If this country could be run by the book it would have been done long ago. It never has been that way and there is no way you can make something work just because you printed a big draft statement put together by educated people that do not know this country. Your proposed cuts on A.U.M.'s did not take in range conditions, it took in slope of drainage. If it is steeper drainage and broken country, it is going to have less grass, but it has always had less and will continue to have less. This was set up by B.L.M. years ago and the wildlife aspect was at that time taken into consideration.

The decline in game population is in conjunction with the decline in predator control. If you consider coyotes and prairie dogs game then there is too many of them. It has come to the point where that is the only game left.

If local input were asked for by reputable people in this area you would have found that rising coyote populations contribute to

1
2
3

December 2, 1980
Mr. Erwin W. Steucke
Page 2

the declining game population. Did you know that high coyote population for instance would sure be a sign of decreased bobcat population. "Dogs kill cats -- coyotes kill bobcats" Ask some of the reputable trappers in the area or other areas.

The reduction in A.U.M.'s in your proposals put such a burden on the ranchers that if you wanted to sell out no one would buy because of your proposal to buy all enclosed land within C.M.R. boundaries. It looks as though you have figured out a good way to make the rancher sell to you because no one else would buy it.

There is much more that could be said on this subject but in conclusion, I feel that no action is the best plan there is. As of the plans that were in the book you didn't leave us a choice, but a lesser of several evils. I would favor a rest rotation system which you don't have available without reductions in A.U.M.s.

Yours truly,

Twitchell Ranch Corp.
Judd Twitchell
Jordan, Montana 59337

JT/cm

Response to Mr. Judd Twitchell

1. There are several rest-rotation systems in use on the refuge at the present time; further use is suggested in the Proposed Action.
2. Please see pages 1 and 2 which indicate the large number of public meetings in which local comments were solicited.
3. Please see Appendix 15; range condition was the basis for the proposed rate.

Brusett, Montana 59318
November 27, 1980

Erwin W. Steucke, Area Manager
Fish and Wildlife Service
Federal Building Room 3085
316 North 26th Street
Billings, Montana 59101

Dear Sir:

I am opposed to any of the actions except continuation of the present management plan. Any of the other alternatives would greatly affect the economy of Eastern Montana. We cannot afford this much loss in revenue in Eastern Montana as nearly all our income comes from livestock and farming.

Over ninety per cent of the game on and bordering the game range is on private land. If we have a cut in livestock on the game range, this wildlife will have to be eliminated on our deeded land accordingly.

I cannot see why we cannot get along the way we have in the past. We will continue to feed most of the game on our private land and not have any reductions in our grazing allotment. If you are going to have any game on the game range you are going to have to plant more attractive food than what grows there, as this game is not picketed there and they surely like these grain fields of ours.

All the environmental organizations and the Fish and Wildlife Service seem to think the only solution to a better environment for game is to cut the livestock. You try to impress everyone how much erosion we are causing with livestock. You have failed to tell anywhere in this Draft Environmental Impact Statement the amount of erosion created by the waves from the water on this reservoir. There are places the waves have cut nice, grassy points off for over a quarter of a mile and there is nothing left but a pile of rocks. I am quite sure if an honest range and soil survey is conducted along this lake, you would find a government agency has caused more erosion from those waves from this lake than all the livestock in Eastern Montana could do. But, there is nothing said about this, as a government agency built this dam, so it is all right.

Another thing: Why don't you state in this draft how much this study has cost the taxpayers of this country to conduct? Also, what could this money have done to improve the habitat had it been used for construction purposes, such as seeding grass and developing water?

If all we farmers and ranchers spent as much money studying what to do as you do, no one in this country would have to worry, as we would all have starved to death.

Copies sent to:
Senator Welch
Ron Marlene
Sec. of Interior, Cecil Andrus

George S. Wilson

Response to Mr. George T. Wilson

1. Preparation of the EIS was directed by the courts (see Summary). Since the cost of preparing an EIS is not normally part of the document, all of these specific costs are not retrievable, so we would not be able to provide you with a reliable estimate.

HIDDEN SPRING FARM
PITTSBORO, NEW JERSEY 08667

November 11, 1980

Mr. Erwin W. Steucke
Area Manager
U.S. Fish & Wildlife Service
Federal Building, Room 3085
316 N. 26th Street
Billings, Montana 59101

Dear Mr. Steucke:

As you may know, we are the authors of GUIDE TO THE NATIONAL WILDLIFE REFUGES which was published by Doubleday last year and was nominated for a Pulitzer Prize.

In the process of researching the book we visited practically every staffed wildlife refuge in the country. There is no question but that C. M. Russell Refuge is one of the finest in the nation.

I have had the opportunity to review the draft environmental impact statement and would like to urge adoption of alternative C (Intensive Wildlife Management).

If you have any questions or wish any further comments from us please do not hesitate to get in touch with us.

Very truly yours,

Laura and William Riley

Laura and William Riley

JMJ

Sept. 18, 1980

Dr. Joseph C. Horvath
Resource Economist

105 IMPERIAL WAY • MISSOULA, MONTANA 59801 • (406) 721-1423

REF: RW 803.6

Mr. Erwin W. Steucke, Area Manager
US FISH AND WILDLIFE SERVICE
Federal Building, Room 3085
316 North 26th St
Billings, MT, 59101

Dear Sir:

May I congratulate you and your staff in Lewistown for the thorough and well defined alternatives and analysis of them - of the CHARLES M. RUSSELL National Wildlife Refuge in Montana!

As a member of the Committee, August-Sept., 1977 visited CMR (page 124 of this publication) I am quite aware of the problems there. Therefore, I realize the blood and sweat and gumbo-mud gone into this report.

My recommendation would be no action for the next five years, then over 15 years go into the proposed one, and from 2001 definitely go into the intensive management for wildlife. This way the transition would not dislocate farmers-ranchers interest and the 20 year span would produce no ill-feeling toward the CMR from the local population. However, 20 years is the time for a new generation, Eastern MT will be industrialized, and intensive wildlife management can be paid for with additional tax base from MT alone.

National refuge is for long term, coming from my native Hungary, I am accustomed to think in centuries - therefore, 20 years are not too long for transition.

May the Holy Spirit guide you and your management staff caring for God's Creation!

Sincerely,

Dr. Joseph C. Horvath

JCH/jch

cc: Mr. Dan E. Hinkley, Team Leader, CMR Refuge Planning Team
Lewistown, MT.

625 Tomi Lee St.
Los Altos, CA 94022
January 11, 1981

Welly Steucke
U.S. Fish and Wildlife Service
Federal Building
316 N. 26th Street
Billings, MT 59101

Dear Sir,

The Fish and Wildlife Service was recently given the right to manage the C.M. Russell National Wildlife Refuge. I would like to comment on the proposed grazing reduction plan your organization has come up with.

I am very much in favor of steps to reintroduce such species as big-horn sheep, black-footed ferrets, swift foxes, and peregrine falcons into the refuge. This would help to fulfill the purposes of the refuge, for it to be a haven for endangered wildlife.

I am also in favor of grazing cutbacks. You have proposed some cutbacks, but for the refuge to really be what it was meant to be, grazing must be phased or cut out altogether.

I oppose proposed plowing up refuge soil to improve vegetation productivity. This would go against the stated goal of the refuge, to provide wildlife with a 'generally natural setting'.

Natural fires would be controlled under the proposed plan. Such fires are vital in renewing vegetation and other balances of habitat. They should be allowed to burn as they would in a natural setting. This does not apply for accidental human fires.

Cabin sites on the refuge should not be allowed to exist. These should be phased out, again to provide wildlife with as natural a setting as possible.

Predator control is a vital but touchy subject. I urge you to plan for a complete halt of all predator control except in extreme cases, such as to protect an

endangered species. Even then the system used should be chosen with great care. Predator control should under no circumstances be used to protect livestock.

I urge you to follow my suggestions for the C.M. Russell National Wildlife Refuge. A refuge is a place for wildlife to thrive safely, not for livestock grazing.

Thank you.

Sincerely yours,

Cindy Davis
Cindy Davis

Erwin W. Steucke, Area Manager
Fish and Wildlife Service
Federal Building, Room 3085
316 North 26th Street
Billings, Montana 59101

After having reviewed the Environmental Impact Statement for the Charles M. Russell Wildlife Refuge I find that the EIS is written in a most biased manner against the range livestock industry. With a reported 92% of the range in the area in good or excellent condition, it seems as tho the intentions of cutting the grazing by 33% were decided prior to your writing of this costly inadequate document. It illustrates once again the waste of taxpayers money by the federal government.

I question the statement regarding the public's desire to reduce or eliminate grazing on the public lands. I believe that perhaps the personnel within the Department of FWS along with a few so-called environmentalists would eliminate grazing, but the majority of the U.S. public still enjoy sitting down at the table and have good wholesome American beef to fill their bellies with. This would not be possible without livestock grazing on the public lands. A very large portion of the livestock produced in the west spend a part of their lives grazing public lands.

You suggest of trying to improve the habitat for wildlife in the area. If that is truly what your intentions are then you should start by eliminating the prairie dog. It seems awfully clear to me that under Executive Order 7509 the only wildlife that was to really be considered were the sharp-tailed grouse and antelope. If once again your figures are correct, with 92% of the range being in good or excellent condition, the habitat goals have already been attained and therefore no reduction in the livestock industry should occur.

The grazing cuts that are proposed would eliminate a sizable number of cattle from the CWR. You must realize that these proposed cuts come off the top of most ranchers income and therefore more ranches will be affected than stated in the EIS. I thereby recommend the no action alternative be accepted rather than the proposed action.

Sincerely,
Walter Colline
So Rt
Ft Peck, Mont 59223

cc:
Senator Helmer
Senator Bayous
Congressman Harleene

Comment From The Public Hearing Not Appearing Elsewhere

Thirdly, I would like to complain myself as to the notification of this meeting because of the cabin owners probably represent a very small concern in the broad grazing concerns and livelihood of the ranchers and of total communities that depend on the ranching economic factor, and I am an avid newspaper reader. I did not--was not aware of this meeting. There was no public notice in my local newspaper. I called parties that own cabins in the Hell Creek area who live in Jordan. They had not heard of this meeting. I cannot believe that they do not read their Billings papers avidly. I called people in Sidney that I know own cabins and they had not heard of it, and other people in Wolf Point had not heard of it.

I heard of it only rather as a favor. Another cabin owner happened to call me and say--call us and warned us, so I do not think that the notification in the Federal Registry in my private library in Wolf Point or in the public library in Wolf Point is adequate enough to alert the eighty or so cabin owners that are in the Rock Creek area and the fifty or so that are in the Hell's Gate area, and I would say maybe in the Fort Peck area. I don't know how many cabins there are or in the Pines area, which I judge to be about thirty or forty homeowners.

Response to Comments from the Public Hearings not appearing elsewhere

1. Notice of the hearings was sent along with all EIS's distributed (over 1,200), and a news release sent to most media (TV, radio, and newspapers). In the eastern Montana area, most media publicized the hearings widely.

CHARLES M. RUSSELL
NATIONAL WILDLIFE REFUGE
ENVIRONMENTAL STATEMENT

LEGEND

- ★ FWS Headquarters
- ★ Corps of Engineers Headquarters

Note Fort Peck Recreation Areas Include

- Air Force Park
- Big Muddy
- Downstream
- Dredge Cuts
- Fort Peck West

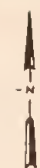


FIG. 10 REFERENCE MAP

REFERENCE MAP

